

**Finding your place:
Rock art and local identity in West Norway.**

A study of Bronze Age rock art in Hardanger and Sunnhordland.



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Preface

The cows were beginning to lose interest. After all, I had been waiting for some time, perched rather uncomfortably on a small stone. At long last the sunlight reached the rock. Slowly, the ship became visible; it came to life and seemed almost to release itself from the rock. Such moments are the reason for my fascination with rock art; that second when the sunlight hits the grey stone and images emerge from a lifeless surface. Ultimately, that is also why I have written this dissertation.

Rock art sites also highlight a second interest, place and landscape. This fascinates me because it is something that people get involved in today. A salient example is the long-running campaign against a planned power line running through Hardanger to Bergen – on the grounds that it will destroy an area of natural beauty. To me places are interesting because that is how we have an affinity with the world in which we live, by relating to places and through them, to people we know and have known, and to periods of our lives.

Writing this dissertation has been a long journey. Several persons have in one way or another shared this journey and experience with me. I would like to thank my supervisors, Professors Liv Helga Dommasnes and Lars Forsberg for constructive discussions. I would also like to thank my colleagues at the Cultural History Collections at Bergen Museum for their help, patience, and friendship. Special thanks to Svein Skare and Hans Davanger for providing photographs from the archives. My friends Marit Midtun and Dorthe Nistad proof read the manuscript, cheered me on, and encouraged me over countless cups of coffee and copious amounts of chocolate. Thanks for reminding me of life in the “real world”!

Finally, I would like to thank my family and my partner Trygve, for their support and understanding. I could not have done this without you.

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Melanie Wrigglesworth

Front cover: Linga in Kvam municipality, as the light brings the ships to life

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Chapter One: Introduction

To be human is to live in a world that is filled with significant places: to be human is to have and to know *your* place (Relph 1976:1).

My objective is to understand how people in the Bronze Age in West Norway related to and structured the world in which they lived, and how this understanding or world-view was manifested by creating places – rock art sites. It is a universal human trait that we need to order the world in which we live. We need to make sense of our lives and events that happen.

Rock art and its location in the landscape is the main focus in this study. However, rock art cannot be studied in isolation; it must be related to other contemporary archaeological material, and it must be interpreted within a social setting, i.e. as a result of social practice. Nevertheless, it is a basic premise in this study that rock art has ritual or religious significance. That does not contradict its social setting – although I believe that rock art was made for religious purposes, it also functioned within a social sphere. Rock art and religion both have a social function. The landscape setting of rock art is important because rock art affected and activated the people who saw it and used it. Equally, its location in the landscape is of interest because landscapes are related to social organisation, power, daily life, and territorial structures. Rock art is one element of social practice taking place in the landscape.

Landscape is a term that can be interpreted and defined in a number of ways. I consider the landscape as both natural and cultural, i.e. as an interaction between cultural constructs and the physical, and it can encompass any number of aspects. As such, landscape could be seen as a social construction consisting of human interaction related to everyday practices, social institutions, power, and so on. Landscape consists of relationships between those aspects and natural surroundings (cf. Johnston 1998; chapter three below). The landscape can also be said to consist of places, and the relationship between these places is of interest in this study. Places are created socially – they come into existence because they are given meaning by a community or individuals. A further discussion of landscape and place is found in chapter three.

The archaeological material that will be subject to analysis consists of rock art sites, barrows and cairns, settlement sites, hoards and objects dated to the Bronze Age, and the landscape in which they are located (chapter four). I have chosen to study the southern part of Hordaland county in West Norway, because this area has a large concentration of rock art from the Bronze Age.

1.1. Some central concepts

I will approach the study of rock art and landscape through a practice perspective, in particular the concept of *habitus* (Bourdieu 1977), which Bourdieu defines as “a system of *long-lasting* (rather than permanent) schemes or schemata or structures of perception, conception and action” (Bourdieu 2005:27; italics in original). The *habitus* links landscape and social practice, as well as identity and social memory (see chapter three for further discussion). Bourdieu's theory of practice is a framework for understanding social practice.

Some phenomenological concepts are also used in this study: Being-in-the-World, dwelling, and inhabitation (Gosden 1994; Heidegger 1996 [1962]; Thomas 1996; Ingold 2000). Phenomenology is interesting to archaeology because it provides a theoretical approach to how people understand, live in, and experience their world. It should be pointed out that phenomenology as philosophy is not necessarily the same as phenomenology used in archaeological research and interpretations, and my inspiration mainly comes from its use in cultural geography (e.g. Buttimer and Seamon 1980; Grange 1989; Relph 1976, 1989; Seamon 1980; Tuan 1974, 1976). Being-in-the-World is a concept developed by Martin Heidegger (1996 [1962]), and simply put this refers to a process of recognising and interpreting things and giving them meaning, or in other words, of being embedded in the world. Dwelling is one way of Being-in-the-World, of perceiving and experiencing the world, and I find that this is a good concept for thinking about landscape (cf. chapter three).

Social memory is another central concept in this study. There was a past in the past, as well as a present and a future, and the past is instrumental in explaining and making sense of the present. Material culture can be used for remembering in the sense that objects can be related to specific persons and events; decoration may be related to mythology or cosmology (e.g. Kaul 1998); rock art panels can be used to narrate history; cairns and barrows could be a direct reference to past generations. Mythology, cosmology, and histories contribute to a

shared understanding of the past and of identity. Memory can be used to legitimise social practice and the state of affairs in the present as well as future actions and events. Social memory shapes personal and collective identity, thus creating and upholding a local identity. One is born into and raised within a social and cultural identity, and social memory plays a crucial role in the shaping of identity (Connerton 1989; Fentress and Wickham 1992). The concept may contribute to our understanding of why a monument is built and why a specific place is chosen, as well as being an analytical tool for interpreting social practice.

1.2. Aims and methods

Why do rock art sites have the location that they have? This question has intrigued me since my first introduction to archaeology. My interest is not in studying the physical landscape as such, rather, my question is how landscape and places were used and perceived by people on an everyday basis. My objectives are:

- To identify possible spatial and temporal patterns in the distribution of rock art sites, burials, settlements, and objects, and to discuss whether these patterns can tell us about life and the use of landscape in the study area in the Bronze Age.
- To discuss whether the patterns identified could indicate a west Norwegian or local identity and habitus.
- To discuss the interpretation of rock art based on the distribution and location of sites. Rock art is usually interpreted in terms of ritual and particularly fertility/sun worship within an agrarian interpretative framework. Did people living in west Norway in the Bronze Age have an agrarian worldview, or are there alternative interpretative frameworks?

These questions will be discussed within a topographical and a social framework. These frameworks are related, in the sense that landscape may shape social interaction and social interaction may shape the landscape. Three related spheres or dimensions will be explored in this thesis, the temporal, the spatial, and the social spheres:

- The pattern of monuments we see today is the result of a long development. By analysing the temporal aspect of monuments and relating them to the landscape, we

can build up a historical trajectory in the study area from the earliest rock art sites to the settlements, thus uncovering patterns in how places were established and used in the Bronze Age. Chronology can be used to throw light on regional and local patterns and contacts. The temporal sphere will be investigated by establishing a chronology of the rock art motifs and dating the graves and artefacts (chapters four and five).

- The spatial sphere: The spatial distribution of monuments, settlements, and artefacts is analysed here and related to the landscape – and each other. In this way, places that were significant to people in the Bronze Age can be identified. The analysis will be related to landscape zones, defined in chapter four, so that it can be determined whether topography has an impact on the distribution and thus the emplacement of sites, as well as an impact on relationships in the landscape; this will produce spatial patterns that can be analysed and interpreted. Spatial patterning might also indicate identity, in the sense that some areas might have concentrations of a particular archaeological material, for instance stone axes, or a specific rock art motif. One of the aims of this study is therefore to analyse spatial distribution in relation to the organisation of the landscape, i.e. to determine whether there are patterns that indicate a specific use of some areas rather than others, and try to establish whether or not the landscape was divided into separate activity areas, i.e. areas that were reserved for burials or making rock art, while other areas were reserved for settlements. Here a study of both regional and local patterns will be conducted. The methodology I have used is a distribution analysis and a landscape analysis, focusing on a set of structural landscape elements as well as shoreline data (chapters three and six). The distribution analysis is linked to landscape zones (chapters four and six).
- The social sphere: Rock art and cairns were created and used within both a social and ritual setting. Knowledge about places, events, resources and so on, and the transmission of knowledge will be in focus here. Knowledge can be transmitted in a number of ways, in particular through ritual activity and social memory, which in turn may also be transmitted through ritual. The ritual and cosmological significance of rock art and burials will be examined in relation to their location in the landscape. Apart from social interaction, these are some of the mechanisms that shape and maintain the habitus (Bourdieu 1977, 2005).

1.3. Archaeological sources

The archaeological categories that will be analysed are rock art sites, cairns, settlement evidence, and objects that are either stray finds or found in contexts that could be interpreted as hoards. The archaeological sources used in this study are monuments in the present landscape and artefacts stored at the Museum of Bergen. The monuments comprise rock art sites from the Bronze Age, graves that can be dated to the Bronze Age through excavation or finds of artefacts, and graves that are likely to be Bronze Age based on construction details and location.

The archival sources comprise bronze and stone artefacts; reports from excavations of graves and settlement sites. I have used several databases: the digital *Topografisk Arkiv* (Topographical Archives) database, which contains digitalised correspondence and reports from excavations and surveys undertaken by the Museum; the Askeladden database¹ run by the Directorate for Cultural Heritage, which contains information on archaeological and historical sites; a database containing the catalogue of archaeological artefacts at the Museum². Printed versions of the archaeological catalogue have also been consulted. One invaluable source of information to anyone studying the prehistory of West Norway is Per Fett's series of booklets on monuments and finds from every municipality within the area covered by the Museum of Bergen, published from the 1950s to the 1970s. The information is also available on the internet³.

1.4. The study area

Hordaland is the third largest county in Norway, with a population of 450,000, covering 15,449 km². This thesis will concentrate on the Hardangerfjord area and the southern part of the county, Sunnhordland. Hardanger is a fjord area to the southeast of Bergen, and includes the following municipalities: Eidfjord, Granvin, Jondal, Kvam, Odda, Ullensvang, and Ulvik (figure 1 and 2). The Hardangerfjord is the longest of the fjords in the area, at 179 km. The fjord and lesser neighbouring fjords are surrounded by steep hillsides and mountains, in particular the Sør fjord. In the lowland, between the sea and the mountains arable land slopes

¹ <http://askeladden.ra.no>

² <http://www.dokpro.uio.no/arkeologi/bergen/hovedkat.html>

³ http://www.dokpro.uio.no/arkeologi/fett/fett_ramme.html

down to the sea. Farming and agriculture form the main economic basis in the area. The climate and soil quality favour fruit growing. Most farms have summer farms in the mountains, where animals graze all summer before being taken back to the lowlands in autumn. There is one large glacier in the area, Folgefonna, at 1644 m.a.s.l.; it is the southernmost glacier in Norway and characterises the Folgefonn peninsula which dominates the Hardangerfjord. Sunnhordland literally means South Hordaland, comprising the following municipalities: Bømlo, Etne, Fitjar, Kvinnherad, Stord, Sveio, Tysnes. Topographically, the area is divided into mountainous mainland and islands, some of which are large. Bømlo, Fitjar, Stord and Tysnes all consist of islands and archipelagos.

I have chosen to use modern administrative units in this analysis: counties and municipalities. The reason is the way information on prehistoric material is organised in Norway, based on the farm on which a site is found, the municipality the farm belongs to and finally the county. This clearly does not reflect prehistoric realities, and this is only a method of ordering the archaeological material. I will transcend the modern administrative borders by ordering the material according to landscape zones and spatial distribution⁴.

⁴ Although Kvinnherad municipality is not a part of Hardanger, the area is a natural continuity of the fjord, and for this reason I will at times include sites in Kvinnherad in discussions on Hardanger. Likewise, Ølen municipality used to be part of Hordaland county, but became part of Rogaland county after a referendum. It is now part of Vindafjord municipality. However, I will include it here, and the area will be referred to as Vindafjord (Ølen).

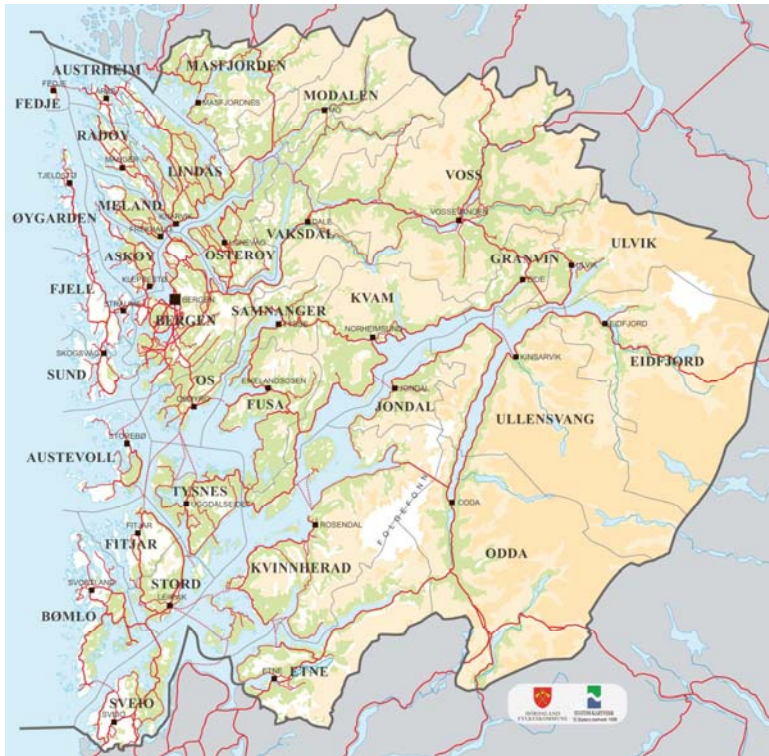


Figure 1 Map of Hordaland county, with modern administrative units marked. Map from www.hordaland.no

Hardanger and Sunnhordland were chosen because there are a large number of archaeological remains from the Bronze Age here, in particular rock art. The Hardangerfjord spans a geographical cross-section of west Norway, as it reaches from the inner fjord and the mountains to the outer coast. There is also a variety in the type of material; in addition to rock art there are cairns and settlement sites as well as stray finds.

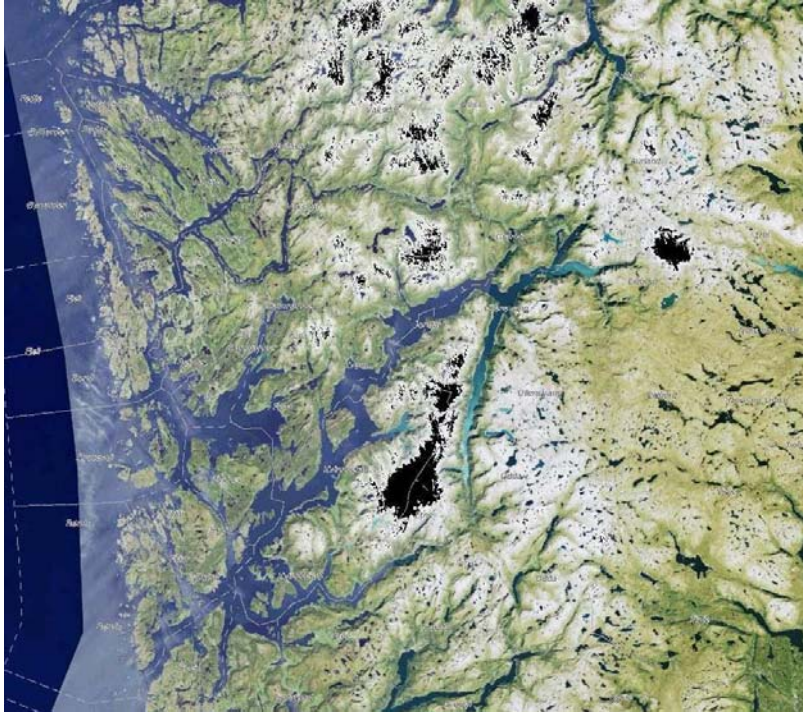


Figure 2 Satellite photo of Hordaland. The Hardangerfjord is visible in the centre of the photo. The black areas mark glaciers. Image with kind permission from www.gislink.no. Map from Norway digital and the Norwegian Mapping Authority.

One of the largest concentrations of Bronze Age rock art sites in West Norway is found in Hardanger and Sunnhordland. In 1970, 65 sites comprising at least 150 panels were known (Mandt Larsen 1972). Since then, several new sites have been recorded, and in 2010, 82 sites with 225 panels are known, new panels are regularly discovered. The dominating motifs are ships and cup marks, and the majority of sites are cup mark sites, most of which are located at or near summer farms or near the paths leading to the summer farms. Rock art is also found inside two rock shelters; however, most sites are open air and close to the sea. The location of rock art will be discussed in chapters four, five and six. Bronze Age graves are generally found near the sea, in modern outfields that are used for pasture, or on promontories, in some cases small islands as well. Cairns are the most common type of grave; however, in the southernmost parts of the study area such as Etne, barrows are more frequent.

Compared to the rest of Southern Scandinavia there are relatively few bronzes in Norway, about 800-850 objects have been recorded (Prescott 2005). There are 34⁵ bronze objects, one gold object, and three soapstone moulds in the study area. One third of the bronzes were found in burials, one third in hoards and the remaining objects have no secure context, although several are probably from burials. The archaeological categories will be discussed in chapter four, and details are found in the appendices.

The Bronze Age in Hordaland has been the subject of several studies. The focus of these studies is artefacts (Aksdal 1996; Aakvik 2000; Bakka 1955; Solberg 1988), cairns and landscape (Østerdal 1999), rock art (Mandt Larsen 1972), rock art and landscape (Vevatne 1996; Gjerde 1998, 2002), rock art and ritual (Wold 2002, 2005).

1.5. The Nordic Bronze Age

The Nordic Bronze Age is usually defined as the period between 1700 and 500 BC (Vandkilde 1996), and in Southern Scandinavia it is characterised by the full introduction of metal (e.g. Montelius 1885; Müller 1888, 1919; Brøgger 1925; Brøndsted 1958; Shetelig 1922). Other main elements are networks of exchange and communication, new rock art motifs, the iconography, new burial customs as well as changes in religion and rituals, and a stratified society, which may have been organised as chiefdoms (Larsson 1986, 1993, 1997; Kaul 1998, 2004; Kristiansen 1978, 1982, 1987, 1991, 1998; Kristiansen and Larsson 2005; Levy 1982; Malmer 1981; Nordbladh 1980; Randsborg 1993; Vandkilde 1989, 1996, 2006; Weiler 1994). Agriculture and animal husbandry were the economic basis, and were fully introduced in the Late Neolithic. Hunting and fishing were still important; fur in particular may have been traded for bronze. The earliest metal objects were imported to Scandinavia from Central Europe (e.g. Vandkilde 1996). Bronze was imported to Norway by way of Denmark and Sweden, later the art of metallurgy was learnt and practised in Norway as well, as a number of sites indicate (Prescott 1991; Goldhahn 2007). Copper and tin had to be imported as it is commonly held that copper was not mined in Scandinavia in the Bronze Age (but see Melheim 2009). Consequently exchange networks were crucial, and these are usually linked to elites as the number of bronzes is low (e.g. Johansen 1993), although this could be

⁵ 29 bronze artefacts from Hardanger and Sunnhordland, five artefacts from Ølen municipality, now Vindafjord municipality in Rogaland county.

partly explained by the lack of preservation and recycling of objects (Bakka 1993). Stone, wood and bone were still the main raw materials. Metallurgy involved new technology and knowledge that could have been limited to just a few persons. Some scholars suggest that this knowledge was upheld by ritual specialists (Goldhahn 2007); others argue that this knowledge was brought to Scandinavia from the Eastern Mediterranean by chiefs and the elite whose ideal was the journey (Kristiansen & Larsson 2005). Along with this knowledge came a new cosmology, centred on the sun and other myths (Helms 1988, 1998; Kaul 1998, 2004).

The Nordic Bronze Age is in fact a southern Scandinavian Bronze Age, based in Denmark and Southern Sweden, and reaches up to include south and central Norway. In northern Scandinavia, the archaeological material from the same period differs somewhat; metal is rare and usually originates in eastern Scandinavia and Russia (Bakka 1976; Olsen 1994). In this thesis, the Bronze Age refers to the southern Scandinavian or Nordic Bronze Age.

The nature of the Bronze Age has been debated to great length and the core of the debate is whether it is constituted by the use of metal and a hierarchical society (Kristiansen 1987), or an agricultural/pastoral economy (e.g. Prescott 1986, 1993, 2006), although there is a general agreement that metal is an important factor, along with the technology and exchange networks; there were extensive contacts between Scandinavia and the rest of Europe (e.g. Kristiansen & Larsson 2005; Larsson 1997). Some of these elements were in place in the Late Neolithic, such as cultivation, longhouses, rock art (cup marks, ring motifs), and processes of social change would have started in the Late Neolithic, but they were cemented and further developed in the Bronze Age. Thus, defining the Bronze Age depends on what elements one considers to be important.

The “classic” Nordic Bronze Age elements are present in West Norway: rock art with similar motifs, barrows and cairns, similar burial customs, three-aisled longhouses, cultivation, bronze objects, similar depositional practices, and indications of metallurgy. All of these elements can be found in the study area (cf. chapters four and six). However, there are differences as well as similarities. The use of bronze was not as widespread as in Denmark or parts of Sweden, and despite the problems of preservation, other materials were used (chapter four and six). Many rock art motifs are similar, but some motifs are not and appear to be local variations (cf. chapter five).

1.6. Chronology

The Scandinavian Bronze Age was divided into six periods by Swedish archaeologist Oscar Montelius (1900). His chronology was based on various styles of decoration, where the earliest objects are decorated with geometric patterns such as herringbones, chevrons, and lines, while spirals became usual in the course of the Early Bronze Age, and wave patterns are a Late Bronze Age characteristic. The six-period system has proven to be relatively consistent, and although Reinecke's system (Reinecke 1965) is often used for comparison with Central Europe, most Scandinavian researchers use Montelius' system. This system is based on Southern Scandinavian Bronze Age material and does not necessarily apply to Northern Scandinavia. The chronology used in this thesis is based on the system developed by Montelius and revised by Vandkilde (1989, 1996:140, 174-5). The revised dates are based on radiocarbon tests from various Danish sites as well as the Danish oak log coffins (Vandkilde 1996; Randsborg and Christensen 2006). I will be using this chronology in order to place the archaeological material within a temporal sphere, mainly by considering the rock art motifs and artefacts. The reason for this is, as will become apparent in chapter four, five and six, that few settlements and graves in West Norway have been excavated and dated.

Early Bronze Age	Period 1	1700-1500 BC (period 1a:1700-1600, period 1b:1600-1500)
	Period 2	1500-1300 BC
	Period 3	1300-1100 BC
Late Bronze Age	Period 4	1100-900 BC
	Period 5	900-700 BC
	Period 6	700-500 BC

Figure 3 The Nordic Bronze Age chronology. Based on Montelius 1900; Vandkilde 1989, 1996.

1.7. The structure of the thesis

In chapter two, a history of research on aspects addressed in this thesis is presented and discussed. Here I will particularly focus on rock art research and spatial analyses in West Norway against a Scandinavian background. In chapter three the theoretical framework will be developed further, with a focus on the concepts of habitus, landscape, place, and social memory. The methods I have used will also be discussed here. In chapter four, the material is

presented and set within a temporal framework. This continues in chapter five, which is devoted to the chronology of rock art. Here I will try to work out a more fine-tuned chronology of the ship images. In chapter six the archaeological categories are analysed in terms of landscape setting, distribution patterns, and chronology. The aim here is to uncover any patterns in the spatial and temporal distribution of the archaeological material. The results of the analysis are interpreted and discussed in chapter seven, where the temporal, spatial, and social spheres are brought together. Chapter eight summarises the results of the study.

Chapter Two: Past and present. History of research

This chapter concentrates on research on rock art and on the West Norwegian Bronze Age, as this area is the focus of the thesis. A much debated question is the nature of the Bronze Age here, as few bronze artefacts are known, and within this debate there is the question of cultural dualism. Although this debate has faded, it will be included here because it has shaped the way the Bronze Age has been viewed and what has been considered worthwhile for research. Rock art is usually interpreted in terms of ritual and religion, and as indicated in chapter 1, a basic premise in this study is that images in rock were made within a ritual setting. For this reason I have reviewed literature that considers rock art as a religious and ritual expression. The landscape setting of rock art is essential in this thesis; hence I have also included literature on rock art and location.

2.1. The Bronze Age in West Norway

The Bronze Age has been the focus of several studies on prehistory in West Norway, many of which concentrate on rock art, and these will be discussed in section 2.2 below. Most studies have been published in reports, anthologies, and journals, some are unpublished MA theses. The studies have mainly focused on graves (Dommasnes 1997, 2001; Linge 2007; Østerdal 1999), settlement (Diinhoff 2006; Prescott 1991, 1993, 1995) and artefacts (Aksdal 1996; Aakvik 2000; Eilertsen 2007; Ågotnes 1986). General surveys have been published in books on local history (Bakka 1963, 1972; Fett 1968, 1972; Sognnes 1977) and popularised history books (Indrelid 1996; Nordenborg Myhre 1998) as well as books on Norwegian prehistory (Brøgger 1925; Hagen 1983; Magnus and Myhre 1976; Shetelig 1922). The general surveys give a traditional view of the Bronze Age society as agrarian governed by chiefs who organised trade expeditions to Denmark, and the emphasis is on bronze, hierarchy, and religion, which is considered to have centred on fertility and sun worship through making rock art, heavily inspired by Oscar Almgren's interpretation of Scandinavian rock art and religion (1927).

Some studies on the Bronze Age in West Norway (and Norway) have brought up the question of cultural dualism: two cultures that existed simultaneously in the same area. The notion that two cultures lived side by side in West Norway in the Bronze Age was first suggested by

Anathon Bjørn (1924:40, 1927). Specifically, he suggested one coastal culture that was Southern Scandinavian in character and that used bronze, and a culture that essentially was a hunting, Stone Age culture, concentrated to the mountains. Gutorm Gjessing published a paper in 1944 where he argued that there were two cultures existing side by side: an agrarian population in the rich farming areas such as Jæren and Karmøy in Rogaland county while a hunting population existed in the rest of Norway (Gjessing 1944). Likewise, Arne Skjølsvold suggested that there must have been two cultures or groups of people, based on the excavation of the Slettabø settlement site in Rogaland, with phases from the Early Neolithic to the Bronze Age (Skjølsvold 1977). The debate was grounded in the fact that there are few bronze objects in Norway compared to Denmark, while stone assemblages are often found at sites dated to the Bronze Age. A premise for the debate is that the Bronze Age was a cultural tradition based on metal and that the Scandinavian area belonged to the same cultural tradition. A similar discussion has also taken place within Iron Age studies, concentrating on Iron Age traces in rock shelters and the use of the mountains (Bergsvik 2005), and in Anders Hagen's book on Norwegian prehistory (1983), where he argued that the caves and rock shelters were inhabited by a different group than the farming population that lived on the farms in the Iron Age.

However, the Jæren area in Rogaland county, Southwest Norway, was largely exempt from the debate, because a large number of bronze artefacts have been found there and the area is thought to have had close links to Denmark (e.g. Brøgger 1925; Magnus and Myhre 1976). This idea was challenged by Egil Bakka (1993), who compared Rogaland with the rest of West Norway. He found that West Norway had a southern Scandinavian Bronze Age in terms of artefacts, houses and graves, and that any variations were mainly due to regional topographical, climatic, and geological conditions. Rogaland has more open and flat land suitable for agriculture than the areas further north, and this allowed a larger concentration of people which could have produced enough surplus that could be used to acquire bronze (Bakka 1993:112). Bergljot Solberg takes a similar view of the Late Neolithic and Early Bronze Age in West Norway (Solberg 1994). Solberg has discussed the population density in West Norway based on the distribution of lithic finds per 10 km², and finds that there must have been a dense population at Jæren in Rogaland county and on the fertile islands in Sunnmøre in northwest Norway, while the distribution of bronzes in Hordaland and Sogn and Fjordane counties indicates a sparse population, and Solberg argues that the variations could have influenced social organisation (1994:118-119). In other words, both Solberg and Bakka

argue that the differences we see in West Norway are not due to separate cultures, but are rather the result of local and regional variation in terms of topography and climate.

Cultural dualism was not accepted by all scholars. A.W. Brøgger argued that flint and other types of stone were commonly used as raw materials for tools in the Bronze Age, and that bronze was an exotic and luxurious material used by the elite (1925:103-105). His argument was based on excavations of Danish Bronze Age sites (Müller 1919), where various flint artefacts and debitage were found, and he coined the term “Stone-Bronze Age” to describe his understanding of the Norwegian Bronze Age (Brøgger 1925:110). Essentially, his argument was that because some objects were not found in bronze, or in small numbers, that did not mean that such objects were not used. Rather, they were made from stone or bone (ibid: 103). From this he concluded that the period was mainly a Stone-Bronze Age in that stone tools were still used and a Stone Age way of life persisted. The major cultural shift took place with the advent of iron, according to Brøgger (ibid:107-113).

Haakon Shetelig discussed the transition from the Stone Age to the Bronze Age (1907, 1922:354-361) along similar lines. His argument was that as flint and stone artefacts were found on settlement sites in Denmark, there had thus been a transitional period where flint and bronze daggers had been used at the same time, before bronze became the dominant material for tools and weapons. Flint was still used for small tools such as scrapers that were used on a daily basis and on a large scale (ibid: 356). In Norway’s case, Shetelig argued that although there are few bronzes, there are graves and rock art sites that are similar to graves and rock art dated to the Bronze Age elsewhere in Southern Scandinavia. He found that there was no development of stone artefacts that could be typologically distinguished as Norwegian Bronze Age types, which he argued would have been expected if the Bronze Age in reality was a Stone Age. In addition, if stone had still been the main material for making objects, he found it strange that such objects were not placed in graves (ibid.: 359) and concluded that there was a Bronze Age in Norway.

Christopher Prescott’s excavations in Skrivarhelleren rock shelter have shed light on the use of the mountains from the Neolithic to the Iron Age (Prescott 1986, 1991, 1995). Here, several phases with dates to the Bronze Age were identified, and some bronze pieces were found, possibly indicating metallurgy. There were indications of a pastoral economy and this was related to a secondary products revolution (cf. Sherratt 1981, 1983). Prescott contested

the notion of cultural dualism, as he argued that pastoralism and the use of the mountains do not preclude growing crops (1993:58-59). The finds from Skrivarhelleren in the subalpine zone is a case in point. Quantities of bones from a large variety of animals were found in the rock shelter: game, pigs, cattle, sheep, goat, fish, as well as grain and wild plants. The site was used in the Late Neolithic and very early in the Bronze Age, with a new phase in the Late Bronze Age and Iron Age. Other sites from the Late Neolithic in the area have the same location as summer farms from the Iron Age up to the present (1993:63). This is interpreted in terms of a model where the sub-alpine and the alpine area is used for both pastoral activity and hunting in spring, summer and autumn, while the winter is spent in the lowland (Prescott 1991, 1993, 1995). In recent years, the cultural dualism debate has faded. One reason for this is that excavations have provided new insight into the Bronze Age: houses and fossilised fields have been excavated all over West and Southwest Norway (e.g. Diinhoff 2005, 2007; Løken 1989), showing clear indications of agriculture from the Late Neolithic onwards. Prescott's excavations of Skrivarhelleren and subsequent publication have contributed greatly here. Rather than discussing whether there was a Bronze Age, other questions are more relevant as more material is excavated, and new theories provide new perspectives and new questions.

2.2. Bronze Age rock art studies

In this section I will review Scandinavian literature on rock art, rather than confining myself to literature on West Norway. The reason is that rock art is always studied in relation to rock art in the rest of Scandinavia, so that interpretations of Scandinavian rock art are a premise for interpretations of West Norwegian rock art. Bronze Age rock art in Scandinavia is very similar, if not identical, and comparisons are thus often made, at the risk of circular arguments. Similar motifs do not necessarily mean the same, however, and this should be emphasised.

Traditionally, rock art studies have concentrated on the chronology, typology, and interpretation of the images, which invariably was religious or ritual. Recent research has sought to include rock art as an archaeological category in its own right and related to other archaeological categories. Rock art is thus interpreted within a greater, social framework, as one aspect of society on a par with settlements, graves and other finds, although it is still seen

as a ritual expression. In addition, there was an increasing realisation that clues to the meaning of rock art could be sought in other factors than discussing the details of the images or relating them to known mythologies (e.g. Bing 1937). The location of rock art in the landscape has thus become increasingly important in rock art studies (e.g. Bradley et al 1994; Bradley 1997a, b, 2000; Gjerde 2002, 2006; Helskog 1999; Mandt Larsen 1972; Mandt 1978, 1991; Mikkelsen 1977; Sognnes 1994, 2001; Tilley 1994, 2008; Vevatne 1996; Wigglesworth 2000, 2002, 2006), in the sense that location can indicate both the social and ritual significance and function of rock art.

Danish archaeologist Jens Worsaae was the first to propose that rock art was made within a ritual context. In the 1880s he argued that the rock carvings were made in order to secure divine protection and fertility. Motifs such as ships, rings, horse, and chariots were interpreted as sun symbols, and anthropomorphic images were interpreted as depictions of various gods (Worsaae 1882: 33, 116). This model was rejected by other scholars at the time, who thought that the images depicted everyday activities, for instance Oscar Montelius who believed that rock art could give information on maritime history, farming and animal husbandry (Montelius 1919:140). Gunnar Ekholm argued that rock art was made as part of a death cult (Ekholm 1917). The rock art sites were places where the living made sacrifices to the dead and helped them on their journey to the underworld. Ship motifs depicted the boats that were used to cross a river or lake in order to reach the realm of the dead. Other motifs were considered to be magic formulae that were supposed to aid the dead on their journey, or help them in their next life (*ibid*). In the early 1900s, the view that rock art was a religious expression became more widespread. Oscar Almgren presented a model based on the notion that rock art was used by an agrarian population in order to promote fertility (Almgren 1927). He used mythology and ethnographical comparison as well as comparisons with Egyptian religion in his argument. His use of Mediterranean and eastern sources was in line with the general idea at the time that culture originally came from the east. Almgren argued that rock art depicted symbolic cult scenes as well as representations of mythology, and that Bronze Age religion centred on sun worship and fertility. He based this on depictions of plants, ploughing scenes and ships that appear to carry rings or discs. Rock art was not meant for the dead, but for the living; the images would ensure good crops and fertility.

Rock art research concentrated on documentation, chronology and typologies (Althin 1945; Fett and Fett 1941; Marstrander 1963), and on interpreting individual motifs as well as scenes

or compositions on the panel in order to identify myths or rituals (e.g. Glob 1969). In the 1960s and 1970s this was criticised as being too one-dimensional. This coincided with the introduction of “New Archaeology”, which was the result of discontent with the culture-historical approach and its fixation on cultures and objects. Instead, some archaeologists began arguing for an anthropological and “scientific” archaeology (Binford 1962). Positivism was a cornerstone in the new approach; culture-historical archaeology was criticised for being subjective, and so the key to more knowledge was objectivity and the formulation of testable hypotheses. Culture was seen as a functional system with subsystems of which Binford identified the social, ideological and the technological subsystems as the most important. Society and culture were considered as systems that had a balanced relationship with nature, i.e. if a variable was out of synch with the rest of the system, change would be the result (Trigger 1989; Olsen 1997).

In Scandinavia, the general interest was in ecology and the environment (Olsen 1997). Several archaeologists argued that rock art should not be seen as a separate discipline; rather it should be studied in a wider context (Mandt 1991). Part of the problem was that although there was a theoretical debate within archaeology, there was no real theoretical approach to rock art studies, which were never an integrated part of general archaeological research. This caused a shift from studying rock art as an expression of religious beliefs and myths to a focus on quantitative analysis, chronology, spatial and geographical analyses, as well as studying rock art in relation to other archaeological material (e.g. Bakka 1979; Johnsen 1974; Kjellén and Hyenstrand 1977; Malmer 1981; Mandt Larsen 1972; Mandt 1983; Nordbladh 1980; Sognnes 1983, 1987) and in relation to resources and the environment (Mandt 1978; Mikkelsen 1977). New theoretical approaches were mirrored in rock art research, for instance, Jarl Nordbladh conducted the first structuralist study of rock art in the Bohuslän area in Sweden (Nordbladh 1980). In the early 1980s, archaeology started to take new directions, and Ian Hodder’s book *Symbols in action* (Hodder 1982) played an important part. Within Scandinavian archaeology, a holistic perspective was focused on: rock art should be related to contemporary society and consequently studied as one of several archaeological contexts. Rock art became a more interesting topic for study, and several studies were conducted where new theoretical approaches were used (Sognnes 1983, 1987; Mandt 1991; Bertilsson 1987; Larsson 1986).

Rock art in West Norway was compared with rock art in Europe and the British Isles in two papers by Eva and Per Fett (1979) and Sverre Marstrand (1978). Eva and Per Fett published a paper where they argued for close contacts between West Norway and the British Isles, due to similar images, in particular ring motifs and cup and rings, as well as the U-shaped motifs (1979). Likewise, Marstrand argued that the images from Ausevik, Sogn and Fjordane, and from Mjeltehaugen were similar to European Megalithic art, and must indicate long-distance contacts. This was also discussed by Gro Mandt in a paper on Mjeltehaugen (Mandt 1983). Eva and Per Fett argued that this had to be researched further. More recently, this has been discussed by Kjersti Vevatne (1996), who conducted a detailed comparison of West Norwegian images with Megalithic art from the British Isles. She found that there were few similarities with megalithic art, and that Irish and British open-air sites did have some features in common with west Norwegian sites, in particular cup and rings and concentric rings. This will be discussed further in chapter five and seven below. This strand of research never inspired a great deal of debate, but has been referred to in later literature, especially on the images in Mjeltehaugen (e.g. Aksdal 1996; Linge 2007)

Some recent studies have addressed rock art in terms of shamanism (Berg 2003; Viste 2003), ritual (Linge 2007; Syvertsen 2002, 2003; Wold 2002; Wrigglesworth 2000), and cosmological beliefs (Fari 2003; Fredell 2003; Goldhahn 1999; Winter 2002). In the late 1980s and the 1990s, neurological explanations, in particular entoptic phenomena, were applied to rock art in order to explain certain motifs. David Lewis-Williams was the main proponent of this view, linking entoptic phenomena to shamanism (Lewis-Williams and Dowson 1990). This theory was also applied on Scandinavian rock art (Berg 2003; Grønnesby 1998a, b; Viste 2003; cf. Price 2001).

The new-found interest in religion was epitomised in a book by Flemming Kaul, "Ships on Bronzes" (1998), where decorated bronze objects, especially razors, were compared to rock art. According to Kaul, the decoration reflects Bronze Age cosmology, where the ship is closely connected to the sun. The ship aids the sun on its journey across the sky during the day and through the Netherworld at night. In addition to the ship, there are other helpers: the horse, the snake, the bird/waterfowl, and the fish, which assist the sun at different stages on the journey across the sky and at night. Bronze Age cosmology and religion thus centred on the sun and sun worship. Kaul argues that the decoration on the bronze objects reflects cosmology, while rock art reflects the rituals that were performed (1998). Kaul also draws on

Egyptian and Eastern Mediterranean analogies in order to discuss Bronze Age religion, particularly in his most recent work on Bronze Age religion (2004). With Kaul's model we have come full circle from Almgren. Like Almgren, Kaul concludes that the sun was a central component of Bronze Age religion. Almgren argued that the religious beliefs were focused on the sun and fertility, specifically a fertility god, whereas Kaul links the sun to a cosmological and mythological complex of beliefs related to the sun's movement across the sky. Kaul's model has proven popular because it is a coherent and all-encompassing system that includes both decoration on objects and rock art to produce a complete hypothesis on Bronze Age iconography.

2.2.1. The location of rock art

Topography became a focus of rock art studies in the 1970s, when several researchers made a point of studying the topographical setting of rock art. Location was seen as one of several factors that could contribute to the interpretation of rock art, and location in relation to paths and water was particularly focused on. Bronze Age settlements and subsistence could thus be inferred from the location of rock art sites (Mandt Larsen 1972:93). This is in line with the general development within archaeology at the time, where settlement studies were prolific, and rock art was studied in relation to prehistoric settlement, burials and central places, and regional and local spatial patterns (Bertilsson 1987; Malmer 1981; Sognnes 1983). Malmer argued that the tradition of making rock art started in Denmark, spreading to the rest of Scandinavia. However, this is unlikely as the amount of rock art in Norway and Sweden far exceeds the sites known in Denmark (e.g. Vevatne 1996), and one would expect the ratio to have been the complete opposite had the rock art tradition begun in Denmark. In addition, Malmer does not consider the Stone Age rock art, which can be found in the same area as Bronze Age art in some regions in Scandinavia, e.g. Central Norway, and indicate that making images in rock was not something new despite thousands of years having passed. As rock art is hardly found in areas of Sweden and Denmark where there are good agricultural conditions and many bronze objects, Malmer concluded that rock art is located peripherally to the economic centres (1981:103-4), and the rock art is thus a substitute for the wealth found in other regions and which was absent in regions with poorer conditions for agriculture. The problem is that the possibility of local centres is not considered – in Norway the regions with a rich rock art tradition also have good conditions for agriculture (e.g. Rogaland county and

Skatval and Stjørdalen in Trøndelag in Central Norway), so that soil quality is unlikely to have been the only factor in the location of rock art. Furthermore, Rogaland has a high number of bronze artefacts compared to the other counties in West Norway (Bakka 1993; Solberg 1994), while also having a large concentration of rock art sites (Fett and Fett 1941; Johansen 1974; Sør-Reime 1982).

Ulf Bertilsson conducted a more nuanced study in Bohuslän, Sweden (1987). Like Malmer, he considered Bohuslän to be a poor area in terms of bronze artefacts, but unlike Malmer, he conducted a spatial analysis on a local level. Using statistical and qualitative analysis he found that rock art is found in clear concentrations and that they were related to open plains (1987:167), an interpretation that has recently been challenged by new shore line data. The new data indicate that the sites were located on outcrops at the water's edge, and that the sites marked sounds and bays rather than plains (Ling 2008). Bertilsson linked the sites to hypothetical settlements and argued that rock art sites could have been centres within settlement areas; some sites could indicate regional central places, and those central areas had more sites, more motifs and more images as well as more settlements (Bertilsson 1987:177-8).

A similar study was conducted by Kalle Sognnes in Stjørdal, Central Norway (1983), where there is a large concentration of Bronze Age rock art. Sognnes postulated a link between rock art and settlement because the rock art sites were located near soil that is easily cultivated (1983:142), and suggested that the spatial distribution of sites could be explained by the settlement pattern. Hence he set up a series of hypothetical territories using Thiessen polygons where each unit had a rock art site that might have been located centrally in the territory. In this way, he argued that Stjørdal was divided into a few large units representing the settlement pattern in the Bronze Age (ibid.:144-6). These three models are concerned with the spatial patterning of rock art in terms of territories and settlements, and basically understanding landscape as a source of subsistence and a topographical unit. This interest in territories is also seen in studies on graves (e.g. Myhre 1981:87-89; Carlsson 1983) and Bronze Age societies in general (Johansen 1986). However, in landscape studies from the 1990s and onwards there has been a development where landscape is understood as a vital part of how people view and understand the world in which they live (e.g. Bradley 1993, 1997b, 2000; Helskog 1999; Sognnes 1994).

Jarl Nordbladh's analysis of the spatial relationship between sites in Bohuslän was a different approach (Nordbladh 1980). He identified regularities in motif combinations and argued that similar structures could be identified in the relationship between the places that the rock art sites create in the landscape. Nordbladh assumed that the rock art sites were located in production areas that he considered as a network of points for identification, resulting in a development of spatial relationships as well as relationships of knowledge. He also found that cairns were located in higher places in the landscape, which he interpreted as representing a zone for the dead, while lower areas were activity zones for production (1980:38-40). The rock art sites are interpreted as a buffer zone, marking a boundary between the area of the living and the dead, and Nordbladh thus considers the landscape as divided into several zones, with rock art serving as symbolic and physical markers.

In a paper published in 1978, Gro Mandt discussed whether location is an interpretative element, based in a discussion of the term agrarian rock art. Bronze Age rock art is often referred to as agrarian, on the basis of their location in good agricultural areas close to fields (e.g. Marstrander 1963), and this interpretation is related to Almgren's theory of rock art as an element in an agrarian fertility cult. However, Gro Mandt went on to demonstrate that many of the sites are in fact located near clayey soils that would not have been used for cultivation in the Bronze Age (1978:174). Instead, she conducted a detailed topographical analysis and concluded that cup mark sites are mainly located in the mountains, while what she calls image-localities are found in the coastal zone (ibid: 182; cf. Mandt Larsen 1972). She concluded that location could not be used for interpretations of rock art (1978:184). Later, this view was nuanced in an analysis of the rock art in Sogn and Fjordane county and Sunnmøre, West Norway, which was analysed in relation to spatial patterning, topography, settlements, cairns, hoards and stray finds (Mandt 1991, 1993). She found that most rock art sites are located near the coast, while most objects have been found further inland, indicating that the various sites had different symbolic functions and thus had a different location in the social geography (Mandt 1993:38-9). As settlement areas are found inland, the landscape is interpreted as being divided into activity zones, where the permanent settlements were located inland, along the fjord or in inner fjord areas, while seasonal activities were carried out in the outer coastal areas. These activities included making rock art (Mandt 1993:39-40).

Other studies have also focused on particular parts of the landscape. David Vogt has conducted several studies on the rock art in Østfold county, East Norway (1998, 2006). He

argues that the rock art should be linked to a political and economic landscape, as the sites are oriented towards plains and pastureland (Vogt 2006). The sites were part of symbolic strategies to culturally control the landscape, and are linked to ideology and the identity of groups that lived in specific areas. Rock art is thus linked to animal husbandry and pasture in outfields. He does suggest that there could have been a cognitive aspect of landscape, where the pastureland is seen as an indefinable grey zone that caused a need to control chaos. Marking the land with rock art would allow a domestication of the forces of nature and to create a cultural order (Vogt 1998:108-10). However, Vogt has recently suggested that rock art did not have a primarily religious function; rather it had a communicative and social function, related to power (2006).

Elsewhere, I have analysed rock art in Sogn and Fjordane county, West Norway (Wrigglesworth 2000, 2002, 2005), where I conducted a visual study of cairns and rock art panels, and found a local pattern to the spatial distribution of the monuments. Where rock art and cairns were found in the same area, the panels were consistently placed in front of or below the cairns, between the cairns and the water's edge. On some panels, the ship images appeared to sail from the cairn to the sea, linking water and land. From this I concluded that the rock art was linked to burial rituals and that the shore zone in this particular area was a "sacred" place, a place for the dead and an *axis mundi* where the ancestors could be reached (Wrigglesworth 2000, 2002).

The visual method has been used in the study of mounds and cairns from the Bronze and Iron ages, for instance a study of cairns in Fitjar, West Norway (Østerdal 1999). The method was also used by Kjersti Vevatne in a study of the rock art in Etne (1996). Here she found that some cup mark sites had a more hidden location than other sites, which she linked to their date. She argued that sites from the Late Neolithic are located in hidden places, where they are not visible until one comes upon them, while later sites are located in open and visible locations (Vevatne 1996). Rock art is related to the introduction of pastoralism and new ways of identifying with the landscape; rituals involving making rock art are suggested to be a way of dealing with social stress. The rock art sites that are dated to the Late Neolithic and Early Bronze Age are related to a ritual "domestication" of the landscape in the course of the introduction of agro-pastoralism (Vevatne 1996:123). At the transition to the Late Bronze Age, the situation has changed: the sites have a different location in relation to lines of communication rather than pastureland, and this is interpreted in terms of an ideological shift.

The sites are now found in more public and accessible locations and are seen as communal monuments, where collective rituals controlled by the elite took place (Vevatne 1996: 124-125). The rituals that included making rock art in the Late Bronze Age could have had an egalitarian or communal character in order to mask social and economical inequalities in the community (ibid: 125).

Visual landscape analysis was done on rock art sites in Skjeberg in Østfold by Anne Haug (Haug 1995). She found that the sites tended to cluster, and the panels were interpreted as collective. Interestingly, she pointed out that although the sites are located in an agrarian landscape today, in the Bronze Age they would have been located in a maritime setting, on islands or promontories, in a seascape with fjords and islands. Thus the panels are associated with maritime communication.

Lise Nordenborg Myhre (2004) has analysed the location of Bronze Age rock art and barrows in Rogaland county, southwest Norway. Her aim is to challenge the centre-periphery model, where Southwest Norway is seen as a periphery in relation to Denmark, and to explore the third space between the two oppositions. She found that both rock art sites and barrows are located near waterways, sailing routes, and inlets to sounds, passages, and natural harbours (2004:223). These monuments might have been established by an agrarian population, but they are oriented towards a maritime environment, and thus she argues that the rock art should be termed “maritime” rather than “agrarian”. The ship is the dominating motif among the figurative carvings, and is interpreted in terms of travel, both physical journeys and journeys to another world as exemplified by ships that sail into cracks in the rock. The thesis is interesting because Nordenborg Myhre analyses rock art in terms of location in the landscape as well as location on the rock, and takes the shape of the rock and composition of images into account. This is comparatively rare within a discipline that is traditionally concerned with studying the images alone (for exceptions see e.g. Mandt 1991; Gjerde 2002, 2006; Wrigglesworth 2002, 2006; Goldhahn 2007).

Johan Ling has conducted a thorough survey of the rock art in Bohuslän, where he has measured the position of the sites in relation to the shore-level. Thus he has been able to reconstruct the Bronze Age landscape setting of the rock art. As mentioned above, rock art has been linked to agrarian areas, as argued by Bertilsson (1987). However, Ling’s study indicates clearly that this is not the case. Panels dominated by cup marks are found further

inland and might well be linked to more agricultural activities, but Ling has demonstrated that the panels dominated by ship images were in fact located on or close to the contemporary shore (Ling 2008). Like Nordenborg Myhre, he argues that figurative rock art was made within a maritime social setting. In addition, the oldest ships are found on top of the panels, and Ling has thus been able to create a chronology, essentially confirming Flemming Kaul's chronology (Kaul 1998). This will be discussed in more detail in chapter five.

2.2.2. Cosmology

In recent years, cosmology has been used increasingly in the interpretation of rock art as well as graves (Goldhahn 1999) and bronze objects (Kaul 1998, 2004), and in studies of the Bronze Age in general (Melheim 2001, 2006; Eriksen 2006; Fari 2006).

Some studies have been more concerned with the symbolic or cosmological significance of the location of rock art, such as Knut Helskog's (1999) use of Sami mythology and cosmology to interpret the rock art in Alta, Northern Norway. Here, the rock art sites are located in the shore zone, and by using shorelines, Helskog has built up a chronology of both the site and Stone Age rock art in Northern Norway generally. He suggests that the rock art was made here because this is an ambivalent zone, a meeting place between the three worlds in Sami and Arctic cosmology: the sky, land and water, and where water is the portal to the underworld, the world of the dead. These meeting places are sacred places, where shamans could make contact with the other worlds (Helskog 1999). As most rock art sites in West Norway are located on the shore, this is an interesting perspective.

Rock art in burial contexts has been related to cosmology as well. Joakim Goldhahn interpreted the rock art in the Sagaholm grave in Sweden in terms of cosmology, in particular regeneration and rebirth. In the Sagaholm grave, dated to period 2, the central burial was surrounded by a ring of slabs, many of which had images of ships and horses. These images faced the burial, and were interpreted as parts of narratives on cosmology and mythology (Goldhahn 1999). He considers the burial ritual in terms of a cyclical world view and sun worship. The rock art is interpreted as a representation of the community's creation myths.

A similar study was carried out in Rogaland county in Southwest Norway (Syvertsen 2002, 2003, 2005). Several graves from the Bronze Age contain slabs with images, including ships,

geometric images and cup marks. The slabs are interpreted in terms of cosmology, and are related to Mary Douglas's (2002) ideas about purity, chaos and cosmos. Death, especially the death of a prominent member of society, causes chaos and imbalance. By including rock carvings in the burial, balance and cosmos could be restored.

2.3. Summary

As this survey shows, much research has been done on Bronze Age rock art in Scandinavia, and the application of new theoretical perspectives as well as the consideration of rock art as an archaeological category like any other archaeological category has resulted in a more nuanced view of rock art, where different aspects are emphasised. This has certainly opened up for several possible interpretations of rock art. Despite the application of new theoretical perspectives, rock art is still largely seen as the ritual expression of an agrarian society in which sun worship and fertility are central elements. Thus it is valid to ask whether this picture could be nuanced. As we have seen, some researchers have argued that rock art should not be interpreted as agrarian, due to location. This is a question that I want to pursue further in this study.

Rather than concentrating solely on what rock art means, we should turn our attention and efforts to how rock art works, i.e. how it might have been used, and the effect it had on the community and society at large. By this I mean that the social aspect of rock art should be highlighted. The social dimension of rock art has been emphasised to a larger degree in recent Scandinavian literature (Mandt 1991; Ling 2008), and this is a direction that in my opinion will contribute to a better understanding of rock art in terms of both meaning and use. Ritual also has a social dimension in that it can be performed in a public or communal setting. This is a good point of departure for studying rock art.

Chapter Three: Landscape, place, memory. Theoretical perspectives and method

Meaning is produced through the dynamic relationship between things, people and places (Thomas 2001:180).

In this chapter, the theoretical basis for this thesis is discussed. First, landscape and place are considered, followed by a discussion on the habitus, memory and the methodology used to analyse and interpret the archaeological record. The various concepts used here, the habitus, memory, inertia are all related in some way. The common factor is that they are all about ways of thinking and ways of understanding the world in which we live. The habitus is shaped through identity, through memory, ideas about what is acceptable and unacceptable, and so on.

3.1. *Landscape and Place*

While landscape studies have become very popular within the archaeological discourse, the term landscape is vague. There is no all-encompassing definition of the term. It can mean anything from the natural landscape (e.g. mountains, hills, valleys), the cultural landscape (e.g. farmland, coppiced woods), urban landscapes (towns, cities) to cognitive landscapes, “soundscapes”, “smellscapes” and “seascapes”. Preucel and Hodder have identified four main approaches to landscape in archaeology (1996:32; cf. Arsenault 2004). The first is *landscape as ecosystems* or natural environment – this approach is concerned with studying the historical environment in a given physical area (Preucel and Hodder 1996:32; e.g. Thornes 1987). The second approach is *landscape as system*, where sites are placed within a pattern of site activities and settlement-subsistence systems (ibid: 33; e.g. Foley 1981). Both approaches are grounded in processual archaeology. The third approach is *landscape as manifestation of power*. Basically, power can be manifested through relations between various individuals and some of these relations can be physically manifest in the landscape, e.g. by constructing monuments (ibid: 33; Bender 1993). The fourth and final approach is *landscape as experience* (ibid: 33; Tilley 1994, 2004). These two approaches are grounded in post-processual archaeology and in particular in phenomenological archaeology. Current landscape studies take two directions: one is the traditional landscape archaeology where the objective is to document the spatial relationship between cultural features in the landscape such as field systems, farms etc (e.g. Aston 1997). The other direction is inspired by phenomenology and

theories on the body, perception, movement in the landscape and so on (Bender 1993, 2001, 2002; Tilley 1994, 2004, 2008; Nash 1997, 2000; Thomas 1996, 2001; Edmonds 1999; Ashmore and Knapp 1999).

Landscape can be defined as an economic unit or a unit that is formed through the interplay between nature (topographical features) and culture, i.e. human influence. Certainly, this has been the traditional view of landscape, with an emphasis on natural resources, the environment, and settlements. Although natural topography will to some extent have a structuring effect, distinguishing between what is natural and cultural can be difficult. Determining what is cultural and natural in a landscape is in itself a cultural choice, that is to say, when we classify a landscape as a natural landscape, this choice is culturally based, effectively making landscape cultural. This is related to a modern view of landscape, where there is a more distinct separation between what is perceived as cultural and natural (cf. Ingold 2000; Darvill 1997).

Several researchers have attempted to define landscape in ways that go beyond the nature-culture divide. For instance, Tim Ingold defines landscape as “(...) the world as it is known to those who dwell therein, who inhabit its places and journey along the paths connecting them.” (Ingold 2000:193). Tilley also defines landscape as sets of relational places (Tilley 1999:177). Julian Thomas has a similar view of landscape, as a network of related places (Thomas 2001:173). Similarly, Ashmore & Knapp (1999) see landscape as an arena for memory, identity, social order, and transformation (1999:10). Landscape is not a separate unit; it is an integral part of people’s lives (Ashmore & Knapp 1999:10-12). This includes all aspects of lived life: buildings, farms, animals, graves, power, social interaction, cosmological and religious ideas, everyday activities such as fishing, hunting, cooking, relationships and so on – landscape is a cultural process (Hirsch 1995:5; Ucko and Layton 1999; Johnston 1998:317). The relationship between humans and the landscape is dialectic as humans transform their surroundings by hunting, cutting wood, building shelters, ploughing the land; yet the landscape also influences humans, it creates physical obstacles and boundaries, and as people invest the landscape with significance and powers, these factors influence humans as well. I define landscape as an interaction between the natural and the cultural, encompassing subsistence, cosmology, rules and regulations, everyday activities and practice.

A main point here is that landscape is important in terms of the meaning that is ascribed to it; landscape does not have meaning in itself. As such it can be said to be a social construction (cf. Altenberg 2003), and can be considered as a materialisation of social structure and practice (Darvill 1999:107). Places are constructed, through use, memories, and movement (e.g. Grange 1989; Relph 1989; Tilley 1994, 2004; Casey 1996; Arsenault 2004; Thomas 2008) and are linked to individual and communal identity because people relate to them. Space can thus be considered as a social construct, as it is created by social relations. Landscape becomes landscape only when space is seen as a complex of places (cf. Ashmore & Knapp 1999:20f). In the words of Edward Relph, space is the context for places, but derives its meaning from particular places (1976:8). A place is defined here as a specific point in the landscape that has meaning to one or more people. Places mean more to people than space, as places are specific delimited units in space and are thus easier to define. In this way the relations between places create meaning and coherence in the landscape. As the meaning of places is reproduced and maintained both in time and space, that meaning is part of the dispositions that make up the habitus. Space does not exist as undifferentiated space; rather, it consists of places because humans perceive space as place in terms of naming their environment (Parker Pearson and Richards 1994: 4). By naming places, the landscape is culturally constructed (Taçon 1994), and stories and histories may be attached to places. As such, places not only become stable points of reference, but they also validate histories and they can become markers of experience and history, adding to the stability and identity of the community. Importantly, people categorise and mark their environment, and thus create meaning. Clearly, meaning does not remain static, and both meaning and any stories of values associated with places may change, as this is part of social practice. However, reinterpretations or changing meanings are restrained by the existing categorisation into places (Parker Pearson and Richards 1994: 4-5). In the case of rock art sites, this is interesting – because the sites are fixed places and many have been used and reused over a long period, as indicated by the number of images and different types of image. Their meaning may well have changed, but still people returned to these places (Wigglesworth 2006). Likewise, cairns may reflect social structure and relationships (cf. Barrett 1994).

3.2. *Being-In-the-World and the habitus: making sense of the world*

A specific branch of landscape archaeology has used phenomenology to study landscape, in particular in relation to Neolithic monuments in Britain (Tilley 1994) and with vague methods. The phenomenological critique has centred on the Cartesian division of body and mind inherent in the traditional approach to landscape, which views landscape as spatial and where space is understood as an abstract “container” for human action (Tilley 1994:7-11). Thus this approach has concentrated on geometrical representations of space, e.g. by plotting on two-dimensional maps. This has been countered by a critique that is essentially phenomenological in character, that argues that space is not abstract, but is always experienced (Thomas 1991; Tilley 1994). However, this critique has not been accompanied by a methodology – indeed, Tilley uses maps as well as photographs in his analyses, and argues that there is no methodology to “(...) provide a concise guide to empirical research. The approach requires, rather, a continuous dialectic between ideas and empirical data” (Tilley 1994:11). This lack of a clear-cut methodology has caused phenomenological landscape archaeology to be considered as “touchy-feely”, as it is based on subjective landscape readings and experience of the landscape. The main problem is that such studies often claim certain relationships within the landscape without providing external support for those interpretations. A case in point is Tilley’s analyses of monuments in relation to hills in Wales (1994; cf. Fleming 1999). Indeed, many phenomenological landscape analyses do appear to consist of the author walking around monuments and relating them to landmarks and “ritual landscapes” (e.g. Nash 2000; Tilley 1994, 2004, 2008). In order to benefit from such analyses, one has to experience the same landscape and visit the same sites, as the result of a phenomenological analysis can be difficult to represent. However, some studies have tried to find ways of representing views from the sites in a more objective manner and to develop methodologies for phenomenological landscape analysis (Cummings 2004; Cummings *et al* 2002; Hamilton and Whitehouse 2006). Another problem is that the emphasis on experience relates more to the researcher’s experience than the experience of prehistoric people. Experience can vary greatly across time and space, as well as in relation to gender, age, context, social status and so on. This means that the accounts produced do not necessarily reflect prehistoric realities – and might never do so. How a landscape is perceived also depends on what relationship one has with a landscape, i.e. a fisherman will put emphasis on other topographical features than a farmer, or an urban academic. Weather conditions also have an impact on how landscape is perceived. This is self-evident, perhaps, but is often

forgotten or left out in the literature. So, how landscape is perceived is not universal (Thomas 1996, 2001; Brück 1998), although the capacity to perceive and experience is. A problem with many such studies is that they take it for granted that as humans, we have the same capacity to experience and that we can experience the same things. While I would agree that there are some universal human characteristics, such as experience, perception and bodily experience, this does not necessarily mean that what I experience as I walk towards a monument is what a person in the Bronze Age would have experienced.

However, despite this critique of phenomenological landscape archaeology, I am still using the phenomenological concepts of Being-in-the-world, inhabitation, and dwelling in order to think about landscape, places and rock art. The reason for this is that the concepts can contribute to a clarification of the relationship between people and the world in which they live, specifically in how things are encountered and made sense of, and how place may be perceived, used, and experienced. The problem is as argued above the lack of methodical development, but also the fact that much landscape phenomenology has concentrated on Neolithic monuments and so called “ritual landscapes”. Everyday life and social interaction are not included.

Places are tangible - they exist and can be identified as places in a specific historical and cultural context. This also allows us to see the landscape as inhabited, that is, inhabiting the world and understanding the world with reference to personal and biological experience as well as to a social or cosmological order. “Inhabitation is a process of understanding the relevance of actions executed at some place by reference to other times and to other places”, according to John Barrett (1999:260). The concept of inhabitation is related to that of dwelling, as developed by Heidegger (2006), Thomas (1996, 2001), and Ingold (2000). Dwelling implies a familiarity with one’s surroundings, or feeling at home (Thomas 1996:89), and is one way of being in the world (Heidegger 2006). Rather than seeing the world as a pre-existing object that a self-contained individual meets, dwelling implies that inhabitation is what makes the world meaningful (Ingold 2000:173).

The concept of Being-in-the-World was developed by Heidegger (1996) to describe how people make themselves at home in the world (cf. Moran 2000). Central to this is *Dasein*, which simply put is a structure of Being, or human existence (Heidegger 1996; Thomas 1996; Moran 2000). Characteristic of humans is that their Being is linked to a world. Basically,

Dasein is always connected to the world. The particular way of Being involves Being in a world (Thomas 1996:64), and this means that humans are absorbed in a world. By world is meant a world of meaningful contexts, where human beings relate things or phenomena that they encounter to an already developed understanding of the world, or a structure of intelligibility. When people encounter things in an everyday context, they make sense of them by relating them to a meaningful context, i.e. to the world that they already know and are familiar with. Heidegger used hermeneutics, not just in terms of method, but also in the sense that human beings are interpretative – that is the core of human experience, we interpret things that we encounter as well as things that have already been interpreted (cf. Moran 2000:235). Humans have a tendency to fall into common habitual practices in their engagement with the world. That means that they interpret or encounter things based on those common practices. These ideas are also found in Bourdieu's concept of the habitus.

At the core of Pierre Bourdieu's theory of practice is the concept of the *habitus*, which consists of systems of durable dispositions, the generation, and structuring of practices (Bourdieu 1977:72). This is not the easiest of concepts to understand, as Bourdieu used it differently in his writings. Habitus is defined as "a system of dispositions, that is of permanent manners of being, seeing, acting and thinking, or a system of *long-lasting* (rather than permanent) schemes or schemata or structures of perception, conception and action" (Bourdieu 2005:27).

The habitus is constituted by society, by the ways people think and act in a social setting. It is created through socialisation and material conditions. This means that the habitus, ways of thinking and behaving, are learned through education, knowledge, everyday routines (Rosenlund 1991). Thus, it is acquired, rather than natural, and is shared by people within the same social conditions, so that it is socially reproduced (Bourdieu 2005). Importantly, the habitus can change, as it is a product of history, but it changes slowly (Maton 2008). New experiences, ideas, knowledge, can contribute to changing the habitus and the way people act and think. However, the habitus changes within certain limits set by the existing structure or society (Bourdieu 2005). Although there are constant changes, those changes take place within a limit so that society remains stable.

The habitus is thus a system of practices that are regular without conforming to rules and that are not necessarily the results of conscious actions. These structures condition the actions and

choices made by an agent. In other words, the habitus can be understood to be something that allows the individual agent to make choices, and those choices are structured by the world around them, but at the same time, the choices that agents make influence the world around them. Hence the relationship between the two is dialectical. Habitus is thus both individual and collective – individual agents have choices in terms of actions or beliefs, but what choices they make are a result both of their experience and history, and that individual's position within a social field. The habitus is thus the routine social practices within which people experience the world around them (Ashmore and Knapp 1999:20). It is how people live, remember, memorise, act, think, and feel. How they do that affects the choices they make, and this is also crucial in developing personal and collective identity. Identity and place are linked in the sense that where we live has an impact on the formation of our identity. The place in which we dwell, what we call home, is the starting point for social relations and networks. A sense of belonging and identity are created over time, through living in a place, learning social codes and how social relationships work, learning about history, or in other words, learning the habitus. Identity is about understanding the community and its rules, and defining or distinguishing between oneself and other persons, and other groups. Identity can be said to be knowledge, i.e. understanding the codes of the community, and it is thus integral to the habitus.

Bourdieu uses the terms *field* and *social space* to indicate the arena where practice takes place. A field is an arena where action or social practice is carried out and it can be political, cultural, ideological, economical, religious, etc. Each field thus consists of structures, and social space is a synthesis of the structures in the most important fields. The habitus is therefore part of this social space. The field consists of positions taken up by social agents, who play a “game” in the field; this game is highly competitive, and its object is to accumulate capital – economic, social, cultural, and symbolic capital (Bourdieu 1977; Thomson 2008). One needs to know the *doxa*, i.e. the unwritten “rules” of the “game”, in order to participate (Bourdieu 1977; Maton 2008). Our actions and choices depend on our position within the social field. Capital is a central element in Bourdieu's theory of practice. There are many forms of capital, economic, cultural, symbolic, and social capital. Symbolic capital consists of things that stand for other forms of capital. Social capital may consist of networks and family relationships, while cultural capital may consist of knowledge, aesthetic and cultural preferences. Economic capital consists of assets such as money, property and so on. Each form of capital can be converted to other forms, for instance, economic capital can

be converted to cultural capital. Cultural capital is acquired through socialisation (Rosenlund 1991). Rock art could be considered as symbolic capital, as it could refer to networks, contacts, travel, and knowledge. Similarly, barrows and cairns could represent economic and social capital. Stone and bronze objects may represent economic, social, cultural, and symbolic capital.

Habitus is a useful concept because people are not necessarily conscious of their actions, they do not analyse their actions constantly in order to understand any hidden meanings or intentions behind them, or the outcome of actions. These actions are routine, they are taken for granted. However, this does not mean that all actions are unconscious, people actively shape their world that they identify with and memorise (Ashmore and Knapp 1999:20). There is no clear boundary between what is conscious and what is not. Consequently, the habitus is constantly in flux, it is constantly being changed. The main point here is that one acts and interacts within a given framework, the habitus.

In terms of landscape, the habitus is particularly interesting because it connects landscape, agency, social practice, and identity. This is particularly useful for understanding places, and how they come to be given meaning. In terms of rock art, the sites might express or represent the actions, choices, and identities that make up the habitus. In the same way, graves might reflect social structure, as well as symbolic capital. As it would seem that not everybody in the Bronze Age were buried in cairns or given prominent burials, it is generally assumed that the cairns and mounds were built in order to bury an upper stratum of the population. In this respect the graves can indicate a social structure, or rather, a representation of social structure. Location in the landscape could thus conceivably represent social practice. This is an interesting perspective in which to consider monuments in the landscape, as they are fixed points.

These concepts are related, but not necessarily similar. Heidegger and Bourdieu were inspired by Husserl (1970) and his ideas on the life-world. Their concepts overlap, and all express the same thing: the human need for meaning and order. Humans need to create meaning and to live in a meaningful and intelligible world. The ultimate result if there is no meaning is existentialism: meaninglessness, chaos, and bewilderment, as described by Jean Paul Sartre in his novel *La Nausée* (1938). Meaninglessness is the cause of chaos and despair. By creating

places and marking them, by building cairns and by making and using objects, meaning and balance are created.

3.3. *Memory, identity and place*

Memory is of interest because it adds a new dimension to the archaeological material and how we interpret it. There was a past in the past, as well as a present and a future, and the past is instrumental in explaining and making sense of the present. Human beings appear to have a need to remember, and material culture can be used for remembering: for instance, objects can be associated with specific persons and events; decoration may have a specific meaning connected to mythology or cosmology; rock art panels may be considered as accumulations of designs from various events and can be used to narrate history; cairns and mounds are a reference to past generations. Mythology, cosmology, and stories about ancestors contribute to a shared understanding of identity and the past. Memory is interesting in this study because it may add to our understanding of why a monument is built and why a specific place is chosen. It is also an analytical tool for interpreting social practice. Memory can be used to legitimise social practice, and is simultaneously integrated in social practice. The past may serve to legitimise actions and the state of affairs in the present, as well as future actions and events. Social memory is interesting in terms of understanding the location of rock art sites as well as the practice of making images in stone and I will use it to analyse and interpret the location and reuse of place, i.e. returning to rock art sites to make more images, or reusing cairns and mounds for new burials, as well as to understand social practice in the Bronze Age (cf. chapter seven).

There are many definitions and approaches to the study of memory. Here, the term social memory will be applied, and it can be defined as “(...) an expression of collective experience: social memory identifies a group, giving it a sense of its past and defining its aspirations for the future” (Fentress & Wickham 1992:25). This definition works well for the purposes of this study, as it embraces the collective aspect, as well as the formation and maintenance of identity, which is central to the habitus. There are several terms for memory on a collective level in the available literature: collective memory, cultural memory, social memory; the terms essentially mean the same. There has been some criticism of the term collective memory as this is seen as studying the group at the expense of individuals and their personal memories (Misztal 2003). Jan Assmann (2006) prefers the term cultural memory, which is a

special form of what he terms communicative memory (Assmann 2006:8). According to Assmann, communicative memory describes the social aspect of individual memory, which grows from interaction between people (2006:3).

Memory has recently been explored in archaeological research as well as in various disciplines such as history, sociology, religious studies, and psychology (e.g. Connerton 1989; Fentress and Wickham 1992; Halbwachs 1992; Hallam and Hockey 2001; Wertsch 2002; Misztal 2003; Stewart and Strathern 2003a; Assmann 2006). Within archaeology, some important books have been published in the last decade (Alcock 2002; Bradley 2002; Van Dyke and Alcock 2003; Williams 2003; Jones 2007). Some studies have been concerned with the development of the human mind and related cognitive aspects (Renfrew and Zubrow 1994; Mithen 1996; Lewis-Williams 2002, 2005), but not with memory as such. Maurice Halbwachs is generally credited as the first scholar to write extensively on the subject (Halbwachs 1992; Misztal 2003). He believed that a collectively remembered past is essential for group solidarity and unity. Halbwachs suggested that the past could be changed in terms of selecting memories that reflect the political present, and that groups develop their own unique past that contributes to a unique identity (Halbwachs 1992).

Memory is both a physiological and cultural process. Here, the emphasis is on memory as cultural process or practice. Several types of memory can be distinguished: episodic or personal memory, which is related to personal experiences in the past; semantic or cognitive memory, remembering knowledge that one does not need to have experienced; and “habit-memory”, remembering through reproducing a performance or action, such as swimming, riding a bike, etc (Connerton 1989:22-23; Assmann 2006:2). Memory is collective and personal, subjective and individual, but it is also structured by language, images, collectively held ideas and experiences shared with other people (Fentress & Wickham 1992:7). However, the boundaries between individual and group memory are blurred. Memory is linked to both personal and group identity, as groups are a stable frame for identity and memory, providing individuals with frameworks where memories are localised (ibid: 37).

In terms of function, memory has an inherent dualism as it can be used for an accurate representation of the past, as well as for creating a “usable” past (Wertsch 2002:31). This implies that one function of memory is to create a past, and by doing so a collective identity is created, based on experience and tradition. Social memory thus reflects the social framework

of a particular group and is subjective in the sense that different groups or communities have different collective memories (Wertsch 2002:40-45), i.e. social memory belongs to one group or community, and each community has its own particular cultural tools for remembering. Such tools could be narratives, genealogies, and ritual performances. Importantly, collective memory is thus integral to social practice. According to Paul Connerton (1989), there are two types of social practice: inscribing practices, where memory is stored in books, computers etc, and incorporating practices, where memory is stored through bodily activity or presence (Connerton 1989:72-73). The latter is associated with commemorative practices and ceremonies that are performative. Social memory is found in commemorative ceremonies, such as rituals, where repetition accentuates continuity with the past (ibid: 44-45). Rituals are a formalised method of remembering or commemoration, and prototypical persons or historical or mythological events are usually referred to in commemorative ceremonies. Ritual re-enactment is featured in this type of ritual and this is important for creating and shaping communal memory (ibid: 61). Thus, ritual is one way of re-experiencing certain events in the past. Traditions are created and upheld by rituals. Social memory is created and maintained through repetitive actions as part of rituals in such a way that memory is embodied. Religion and ritual are therefore two related practices that are ideal for preserving memory, as the repetitive nature of ritual actions and storytelling contribute to continued remembrance. This will be pursued in chapter seven below.

One of the ways in which memory can be preserved is through referencing to the material world that people are familiar with (Connerton 1989; Fentress & Wickham 1992:37; Taçon 1994; Ingold 2000; Stewart and Strathern 2003b:4-5). Methods of transmission are through speech, narrative, genealogies, rituals, and body language (Fentress & Wickham 1992:47). Gosden and Lock (1998) distinguish between myth or mythical history and genealogical history. The latter is the main method for narrating history in non-literate societies (1998:5) and various mnemonics are used for remembering. Kinship might have been very important in Bronze Age society, regulating social relationships and alliances, as well as economics and politics. Ethnological evidence shows that landscape can act as a mnemonic, indeed, it *is* memory, for instance in Aboriginal Australia (e.g. Morphy 1995; Ingold 2000). This could certainly be the case in the Bronze Age as well, in the sense that places or topographical features could have been associated with historical or mythological events. However, there are other possibilities, e.g. repetition through songs, rituals, and monuments. Most archaeological studies of memory tend to concentrate on monuments, in particular burials and

the archaeology of death (e.g. Hallam & Hockey 2001; Williams 2003). The term “monument” comes from Latin “*memore*”, which means to remind (Bradley 1993:2, 2002). Monuments may be built for any number of reasons: to commemorate and remember; to display wealth or social status, to mark places, to confirm and strengthen social relations. Monuments are eternal and timeless, and as such are fundamental in the transmission and maintenance of social memory, as ideas, cultural and social identity can be communicated through monuments. However, the meaning and shape of a monument may change drastically from the time of its construction (e.g. Barrett 1999; Bradley 1993, 2000; Edmonds 1999). The past exists in the present and in the future through monuments. Temporality is integral to understanding place, landscape, and memory. Landscape does not only consist of spatial relationships; it also consists of temporal relationships, e.g. between monuments or between the present and stories about the past. Certainly, this is an interesting perspective in which to consider rock art, which does seem to bring together the past, present and future, and thus changing conceptions and meanings. It is conceivable that rock art might have been used as a mnemonic, as the images were reused or re-carved (cf. chapter six and seven). Likewise, an object could have been used to tell a story about the past, or a particular object could have a biography of its own. Social memory includes cosmology, mythology, and places related to mythological and cosmological events; knowledge of old meeting places, paths, burials and abandoned settlements, within a specific historical and cultural context (cf. Ashmore & Knapp 1999:14). In other words, social memory refers to a specific spatial framework (Halbwachs 1992). Memory tends to be organised around places and sensory experience, and leaves traces in the landscape (Halbwachs 1992; Myszal 2003:16-17). This means that the landscape can potentially include both collective and personal memory.

Memory and identity are closely linked and the relationship is dialectic – identity shapes memories in terms of what is considered worth remembering, and memories shape identity. Memory consists of images, speech, experiences, and emotions. Images and words complement each other. Images are metaphors, as they contain information that persons with the same cultural identity can “read” and understand. Codes and symbols have accumulated over a long time and as such form a cultural “language”. Metaphors involve taking a term from one frame of reference and using it within a different frame of reference (Tilley 1999:4). Some metaphors will always be understood regardless of geography and social or cultural background. Other metaphors are culture-specific and can only be understood by those who know the cultural codes, hence metaphors may not be understood by someone who is not a

member of a particular cultural group (ibid:9). Identity and metaphors are thus related, and this creates a basis for constructing a collective experience and memory.

Social memory shapes personal and collective identity as well as cultural identity. Consequently, it creates and helps maintain a local identity. One is born into a social and cultural identity, and social memory plays a crucial role in shaping that identity. Personal and social memories create individual identities as well as group identity, and what an individual remembers and chooses to remember is related to group identity, in the sense that stories and traditions are part of group identity and are learned from childhood. This means that memory plays an important part in how the world is experienced and perceived individually and collectively.

Memory and the habitus refer to both continuity and change, and in this respect inertia is interesting. Inertia can be defined as the absence of change (Dodgshon 1998:162) and is society's reaction to change – although the world is constantly changing, people want things to remain constant. The willingness to accept change decreases as communities become more fixed in space and place: as agriculture is introduced, people become more connected to places, and less likely to want changes. Inertia maintains the structural character of society, i.e. the parts of a society that change slowly and resist quick or sudden changes (Dodgshon 1998:162). Social practices and processes are centred on structures leading to inertia, which should not be separated from other structures. This has implications in terms of how we think about landscape, as inertia can be as powerful as change where variation in time and space is concerned. Inertia is also related to memory in that memory preserves what is and has been. In order to maintain the equilibrium, a past can be constructed so that things can be explained. As a community becomes more established, its structures become more stable and less susceptible to change. This means that avoiding change and preserving a way of life could be in the interests of some persons or groups, or the community as a whole. On the other hand, changes did happen – new burial rites and ideas about the treatment of the dead, for instance. New ideas and influences were incorporated into existing traditions, so that changes were brought about slowly. This continuity creates stability and identity, and can be maintained for instance through ritual. Inertia, and thus continuity, is one indication that social structures are upheld.

The idea that there was a past in the past is, perhaps, a reflection of the modern linear understanding of time. There are other ways of conceptualising time and the past, as is shown by ethnographic evidence. One example is a study of Sami concept of time, carried out in Northern Sweden (Bergman 2006). The Sami concept of time is nonlinear and related to annual subsistence activities, especially the division between summer and winter. The year was divided into lunar months, and the names of the months were given depending on the activities that were carried out during a particular month. Time was therefore contextual, as well as cyclical. Mobility meant that settlements were abandoned regularly, and dwellings were left to decay. Later, new dwellings were constructed, so that a settlement would reflect recurring events (Bergman 2006:153). In this way, space reflected time. Ancestry was considered in terms of events and characters, and the dead lived in a parallel and contemporaneous world to the living, so that there was no chronological depth. This means that there was no distant past; the world is seen as timeless and eternal (Bergman 2006). There are stories about the creation of the world, but this mythical past is rather seen as ever present. Settlements and graves were not considered in terms of ancestry or kinship; they were not used to remember the past. The landscape was significant, but not in terms of a directed history (Bergman 2006:158). This example is interesting and thought-provoking, although it might not necessarily be directly transferrable to a prehistoric sedentary society.

3. 4. *Methods*

The archaeological material will be analysed using a spatial and chronological distribution analysis, where rock art sites, graves, settlement sites, and objects have been plotted onto two-dimensional maps. This rather traditional method will be used in order to establish whether there are any patterns in time and space in the archaeological material and this will hopefully lead to an interpretation of the social practices, involving rock art in particular, at play. A holistic perspective allows an overview of the archaeological material and will expose any temporal and regional variations. This analysis is carried out on a regional and a local level. The regional level includes the entire study area, while the local level includes areas within the study area that will be subjected to a closer analysis and interpretation. This will, it is hoped, lead to more information on how people who lived in the area related to their surroundings and social practices, and how they formed their habitus.

My approach to landscape and location is twofold. The distribution analysis will be conducted based on three landscape zones, which have been established on the basis of topographical elements (cf. chapter four below). This will, it is hoped, give some indication as to whether topography has any impact on what parts of the land are used for activity, and whether there are local differences in the distribution of the archaeological material. I will combine the distribution analysis with recent shoreline data and maps to give an overview of the archaeological material. My main focus is the location of rock art sites. However, contemporary archaeological material will also be analysed: settlements, graves, hoards and stray finds. The analysis is temporal and spatial, and the archaeological categories are compared and interpreted holistically. In this way, I hope to understand the social, temporal and spatial dimension of the archaeological material, and how people in the Bronze Age engaged with their world through material remains. By analysing the distribution of all archaeological categories in relation to landscape zone and period, I hope to shed some light on the social sphere, practices and use of landscape. I will also emphasise some specific elements in the analysis: nodes and meeting-places. As will become apparent below, these are specific points in the landscape where roads meet, or communication routes, and I find that these are interesting in terms of the location of rock art and graves.

Any study of landscape must take into account that what we see today is not necessarily identical or even similar to the prehistoric landscape. Changes have occurred, especially due to agriculture. Fields have been created and shaped by adding soil, forests have been cut down, and river courses have changed. An essential element here is changes due to land uplift – what we see today might not even have been present in prehistory, for instance islands that would have been submerged, or points that would have been islands in prehistory. A problem in any study of landscape and place is that meaning can be attached to elements that cannot be traced archaeologically, for instance trees, groves, natural features such as mountains, stones, rivers, or even empty spaces (cf. Bradley 2000). Although it is likely that meaning was attached to such features, this cannot be demonstrated with certainty.

In order to systematise the location of rock art in particular, I will use elements taken from visual landscape analysis; this particular method was developed by Norwegian archaeologists Terje Gansum, Gro Jerpåsen and Christian Keller in order to study prehistoric cemeteries (Gansum 1995; Gansum *et al.* 1997; Jerpåsen 2009). It is based on landscape architecture and the psychology of perception, and is heavily influenced by the book “Image of the city” by

Kevin Lynch (1960). Most of the terms used in the analysis are taken from his book and have been developed further in order to describe how people perceive landscape. There are two key concepts here. The first is orientation, that is, how people structure and recognise their surroundings (Gansum *et al* 1997:11). Although the landscape is experienced individually, the experience is part of a larger cultural framework, where experience is constructed socially and culturally. Knowledge of the landscape is thus based on personal, social, and cultural experience. Landscape perception is the second key concept. People do not see the landscape as a single unit, rather they select elements that they “see” and to which they ascribe meaning; hence, the elements that individuals notice and the meaning that they attribute to those elements are social and cultural constructs. It should be emphasised that the method is not used to analyse monuments, but the places where monuments are located and the qualities of those places. It is important to note that this method only describes how the observer perceives the landscape; it is a tool for describing features in the landscape rather than an accurate description of a prehistoric reality. Consequently, the visual landscape analysis can be used to describe the main topographical elements, such as mountains and hills, rather than smaller features. However, despite the problems with the method, I believe that some elements can be used in order to describe the prehistoric landscape. The important thing here is that those elements should be combined with other methods, such as shoreline displacement curves, or by using resources such as satellite images and aerial photographs.

How landscape is perceived depends on personal experience as well as the social and cultural context. By this I mean that how I perceive landscape is likely to be completely different from that of a person in the Bronze Age, or even a farmer or a fisher in our modern age. Perception also depends on the activities within a landscape. That is, a hunter will view and experience the landscape differently from a farmer – because they will use the landscape in a different manner (cf. Meløe 1990). What we experience is experienced within a cultural and social setting. A hunter will move through a landscape differently compared to a fisher and an urban person will have a different knowledge and skill. Nevertheless, I think some of the concepts within the method are useful, in particular structuring elements, as this provides a terminology for describing localisation and thus to systematise the location of sites. The main reason for my use of the method is the identification of possible structuring elements in the landscape and the possible views to and from a site. This, I believe, will add to our understanding of why a specific location was selected.

By systematically analysing the location of rock art panels, an underlying pattern may be uncovered, which in turn may shed some light on the meaning of the rock art and how the landscape was used in the Bronze Age. I am using this method in combination with shoreline data. I emphasise the following structuring elements in my study of landscape:

Edges or borders: linear elements that have a limiting character, e.g. mountains, valleys, bodies of water, vegetation.

Movement/passages: linear elements in the landscape that also serve as natural passages. The landscape is often experienced on the move and natural lines of communication and movement have an impact on how the landscape is experienced and perceived. Natural passages are e.g. rivers, paths, roads, valleys, shore lines.

Nodes: points of intersection between various passages or lines of communication, e.g. crossroads, converging rivers, or the mouth of a river, estuaries, meeting-places, a hill. Nodes are strengthened by a strong local identity; however, what is considered as a node is culturally specific and may thus change in the course of time. In this study I will focus especially on possible meeting-places in order to consider social interaction.

Landmarks: marked places in the landscape that can have an impact on different scales and thus influence small or larger areas, and that can be used for orientation and navigation, e.g. a special topographical formation, a boulder, a mountain, a building, a special tree etc. Landmarks are also culturally specific; they function as landmarks as long as people ascribe meaning to them, so that what is considered as a landmark may change. Elements that we identify as important, as dominating in the landscape, may not have been the determining structures in prehistory. On the other hand, particular mountain formations have been known to have been used as landmarks for navigational purposes for centuries in west Norway, for instance the island and mountain Alden in Sogn and Fjordane (Wrigglesworth 2000).

Districts: naturally limited and uniform areas, e.g. valleys, bodies of water such as lakes.

I have not been able to study the location of all rock art sites in the study area; this applies mainly to cup mark sites. The reason is that the cup mark sites are often found on small stones or slabs that can be moved and hence are no longer found in their original context or have no

provenance, e.g. at Aga several stones are now incorporated in the entrances of houses; some have also been removed and are now placed in the stores of Bergen Museum, e.g. a stone from Husa, Kvinnherad (B 9683). This also applies to some stones or slabs with figurative images such as Hagen, Odda (B 10309). Some sites and panels have been destroyed as well, and some sites have been reported and subsequently have not been located. Also, many sites are difficult to locate due to covering vegetation and erosion, making some images hard to see and locate unless the lighting conditions are perfect.

For the analysis to give any results, the main topographical elements of the landscape must be visible. In dense forest, for instance, it can be very difficult or impossible to discern the topography. Another problem is that we do not know what the vegetation looked like at the sites that will be analysed here and it should be emphasised that the sites have been analysed based on the present landscape, i.e. vegetation cover, river courses and so on. The modern landscape is the result of four thousand years of agriculture and has been shaped and reshaped by farmers. Prehistoric vegetation is uncertain – we know it was there but we do not always know what or where, and pollen data cannot give an exact reconstruction of the actual vegetation cover. For this reason the analysis is based on the contours of the landscape rather than vegetation. Areas that had not been cleared for agriculture, pasture and settlements were probably covered by deciduous forests and shrubs (Hjelle *et al* 2006). With a higher shoreline many sites were shore bound to a higher degree than today, so that vegetation probably did not grow around them. We do not know whether the area around a rock art site was cleared regularly, or controlled in some way. Visibility changes with the seasons – a site that is surrounded by trees will be hard to see in summer, but will be easier to see in winter, and this applies to the view from the site as well (cf. Evans *et al* 1999; Cummings and Whittle 2003). Weather conditions will also cause visibility to vary from day to day.

An important element in this analysis was determining the *accessibility* of the sites. The reason is that if a site is in an accessible location, this tells us something about the intentions of the people who created the site and about the importance of that particular place, because the accessibility of a site sends a message to potential visitors. An inaccessible site indicates that it might not have been available to everyone, and that one might have needed to have special knowledge in order to find and visit the site. On the other hand, an accessible site indicates that it was available to more people, and that it might have been intended to have been available, which would indicate that the knowledge it represented and whatever actions

were carried out at the site were also meant to be available to people. Another possibility is that an accessible site might have been reserved for a small number of people within the local community. However, even if one did not need special information or knowledge to find a site, one might not have knowledge of the meaning of the images or the events taking place there. My point is that accessibility is an important element in trying to understand the location and meaning of archaeological sites, in particular rock art sites. Accessibility can be assessed by considering location in terms of lines of communication, such as paths and shipping lanes/natural sea routes, as well as proximity to harbours or other places that could be seen as meeting-places. In order to indicate the accessibility of a site, I will use the terms “private” and “public”. A private site is a site that is considered as inaccessible or less accessible. It might be enclosed or hidden from view. A public site is a site that is easily accessible, and it might also accommodate a large number of people. Thus, a site that is located in the mountains is in principle accessible, in the same way that a site located near the sea is in principle accessible – they could have been seen by passersby. The view to and from a site will be particularly important here. Although vision is not the only criterion, it is important because whether a site is visible from the “outside” or whether one can see anything from a site might tell us something about whether the site was intended to be “private” or not; whether it was meant for large groups of people or not, etc. So, vision is emphasised here in terms of what is open to view and what is hidden or concealed, because this is related to knowledge and the social control of knowledge. The implication is that if a site is open to view, it could be interpreted as an accessible place, while a concealed place could be restricted in terms of both access and knowledge about it.

One of the criticisms against landscape archaeology is the importance placed on the visual properties of landscape. This is linked to what Julian Thomas calls the gaze (1993:23), a western and modern way of looking at the landscape. The gaze is a way of objectifying landscape and is related to landscape painting. In this type of painting, the landscape is presented as a view of a place, painted as realistically as possible. This means that the viewer actually looks at the place from the outside and this is what is meant by the gaze: we see the landscape as an object, from without and frozen in time. The landscape is thus represented as vision (Thomas 2001:168-169). The purpose of the gaze is to make things visible (Thomas 1993:23); it is all-seeing and penetrates everything, and it sees landscape as an object from which to take pleasure. To counter this dominance of vision, other senses should be included. This is of course a highly subjective aspect; however, some sounds would have existed in the

past as well: the sound of breaking waves, the tide coming in or out. A waterfall would have made much noise, for instance, and would have formed an integral part of the environment. Whether sound was central in determining the location of monuments is a matter of interpretation. Some research indicates that Neolithic rock art in Northern Sweden was made near rapids where the water makes so much noise as to make all other sounds disappear (Goldhahn 2002). The rock carvings were made in the noisiest and most dangerous part of the rapids. This is interpreted in terms of shamanism, where the noise and the water would aid the shaman in reaching an altered state of consciousness (Goldhahn 2002:50). A few studies have been done on the aural properties of cup-marked stones and boulders in Sweden, where some stones produce a special sound when struck (e.g. Viktor 2002; Hultman 2010). A boulder with cup marks at Aga is called “Klokkesteinen” (“The Bell Stone”) because when struck it emits a deep bell-like sound. However, sound is an aspect that is difficult to assess in terms of prehistory, because river courses and waterfalls could have changed since the Bronze Age. Certainly, it should be borne in mind when considering location (cf. Hamilton and Whitehouse 2006).

3.5. Summary

This chapter has focused on the theoretical aspect of the study, in particular on ways of experiencing and perceiving the world. My approach is inspired by phenomenology, cultural geography, and sociology, in particular Bourdieu’s theory of practice. In combination with some phenomenological concepts, this theory is used to understand how people engage with the world, why people act and behave in the way that they do. By linking these theoretical perspectives to regional and local patterns, I hope to learn more about how location in the landscape can provide information on social practices and engagement with the world. These aspects are important to consider because they provide a framework for understanding the social dimension of the archaeological material. Understanding how humans engage with the world can also help us understand and interpret change and continuity. By using a distribution analysis, a more complete picture of the activity in the study area in the Bronze Age can be gained.

Chapter Four: The archaeological material

The archaeological categories make up what Julian Thomas calls “a matrix of relations of intelligibility” (Thomas 2001:65), which constitutes the world in which people lived. By analysing all categories of archaeological remains from the Bronze Age, it might be possible to identify patterns in their distribution and location which can give more information on how the landscape was perceived and used. Context and chronology are therefore essential in order to understand how the landscape was inhabited. It is not my intention to create new typologies, and for this reason I have relied on existing typologies and chronologies when considering the archaeological material.

4.1. Landscape as archaeological category

Landscape is the one thing that unites graves, rock art sites, settlement sites, and hoards. The landscape can be regarded as an archaeological category because of its materiality. It is not static, nor does it simply exist; it interacts with the people who inhabit it, it imposes constraints and may offer resistance, hence it is dynamic. Landscape interacts with people and creates identity as well as a sense of belonging and has an impact on how people adapt and choose to live their lives. There is a dialectical relationship between people and landscape, people change its appearance by e.g. clearing the land, or adding elements to it, but the landscape also imposes restraints on what people can do to it. Consider for instance parts of the Hardangerfjord, where the mountains rise steeply out of the fjord for kilometres at a time. This has implications for where there is land on which to settle. In the Sør fjord the available land is steep and best suited for sheep and goats, and can be a challenge for agriculture. In this way, the landscape is as active an agent as are bronze axes or rock art or graves.

One way of studying the landscape as an archaeological category, is to study its topography. This can be done in a number of ways, for instance studying geological maps, soil conditions and thus finding out where the best areas for agriculture are, recreating the landscape through shoreline displacement data, and so on. I have chosen a combination of methods, mainly shoreline data so that part of the landscape can potentially be reconstructed, as well as studying the geography of the study area, and I have divided the area into three main zones (cf. Sund 1963; Mandt Larsen 1972; Puschmann 2005):

- Zone 1: the coastal zone
- Zone 2: the intermediate, fjord, zone
- Zone 3: the inner fjord/mountain zone

The first zone includes the islands and outer coastline, the second zone includes the fjords, and the third zone encompasses the inner part or end of the fjord and the mountains. By considering the other archaeological categories in relation to these zones, we might be able to find patterns and learn more about how the landscape was used. The zones are rough approximations, and are marked in figure 4.

The zones are important to consider because the topography and climatic conditions vary greatly from the outer to the inner zone. The West Norwegian climate is mild, with a large amount of precipitation and relatively mild winters. Weather and temperatures are vital to the people who live on the coast, as it affects daily life directly. In zone 1, there is less soil and thinner layers of soil than in the fjord areas, for instance, so this area is less suited to agriculture, and animal husbandry and fishing are important parts of the economy here. In the Bronze Age, the mean temperature was about 2-3 degrees Celsius higher, so the winters would have been even milder, and the summers would have been warm. In the outer, coastal zone, the islands and coastline are exposed to different temperatures than in the inner fjord area, where it is generally warmer in the summer and colder in the winter, and less rain. Thus, the inner fjord areas are ideally suited to agriculture in addition to animal husbandry. In chapter six, this information will be analysed and correlated with the remaining archaeological categories.

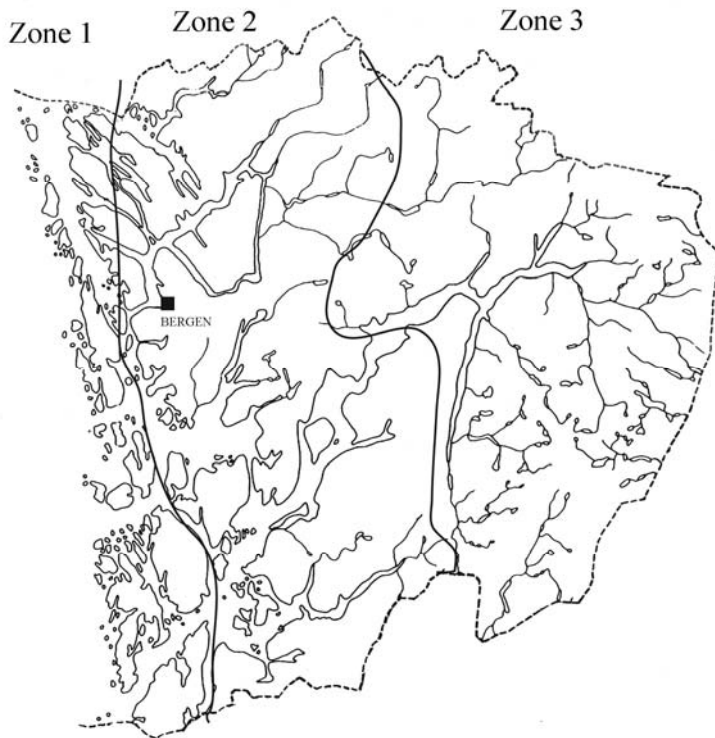


Figure 4 Map of Hordaland county with landscape “zones” marked. Drawing based on Mandt Larsen 1972, map A

I have used shoreline data from recent studies in Hardanger (Romundset 2005; Vasskog 2006) in order to produce the shoreline curves that are presented in this and the following chapters. The shoreline curves were produced using SeaCurve v1, a MS Excel diagram based on recent studies of shoreline data in Hordaland (Lohne 2006). Shoreline displacement data may indicate a *terminus post quem* for rock art sites, provided that the images were made at the water’s edge, as the data only indicate when the rock emerged from the water. Recent projects have gathered and analysed data in order to create new shoreline displacement curves in West Norway, and in particular the Hardanger area (Romundset 2005; Vasskog 2006). The curves for the Stone Age are the most reliable, while there is less data for the Bronze and Iron Ages (David Simpson, pers. comm. August 2006). This means that the curves must not be taken at face value as there could be a divergence of a couple of metres either way. Clearly, there is potential for more research on shoreline displacement in the Bronze and Iron Ages in Hardanger. However, the curves are a good indication of the land uplift in the area. The land uplift was less dramatic in west Norway (e.g. Sognnes 2003; Pässe 2003; Ling 2008), so much so that most monuments are likely to be found in their original topographical context in

terms of location in relation to the contemporary shoreline. This would appear to be the case in the study area. The curves indicate a variation of about six metres from the outer islands to the inner parts of the Hardangerfjord, where the shoreline was approximately 12 m.a.s.l. in the Early Bronze Age, dropping a couple of metres in the Late Bronze Age. It should be pointed out that the curves measure high water levels. The variations due to the tide are probably minimal, but should be taken into consideration. Thus, despite the fact that the available shoreline data is not accurate in detail, we can still get a general idea of the situation in the study area, especially when compared with the monuments and their position relative to the shoreline. The main areas where the shoreline would be notably different would be the innermost ends of the fjords, where the shoreline would have been significantly higher as indicated by the diagram (figure 5, 6, 7), and relatively flat areas that would have been shallow bays in the Bronze Age.

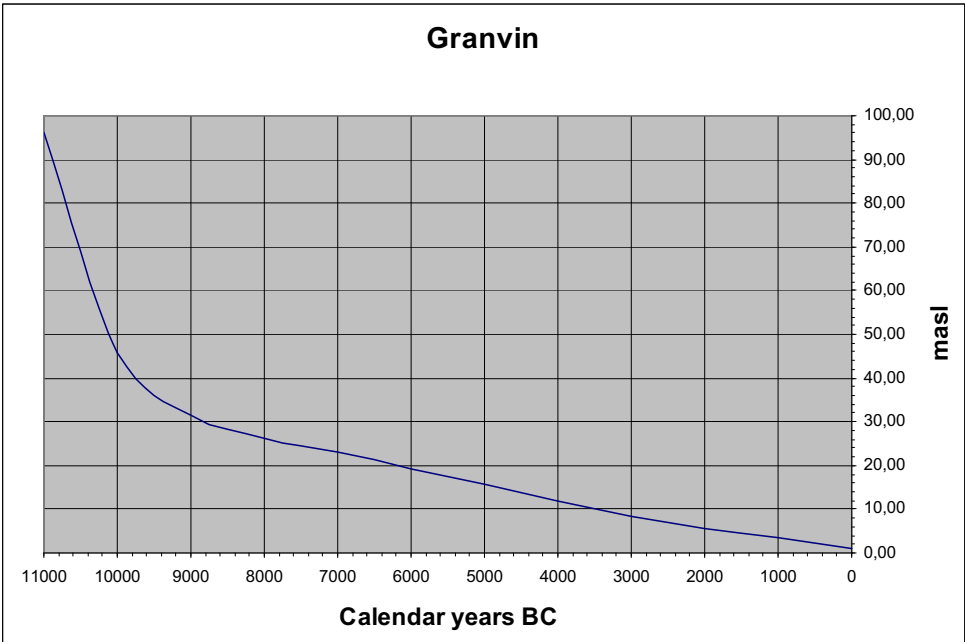


Figure 5 Shoreline diagram for Granvin, indicating that the shoreline was approx. 10 metres higher than at present at the beginning of the Bronze Age, around 1700 BC

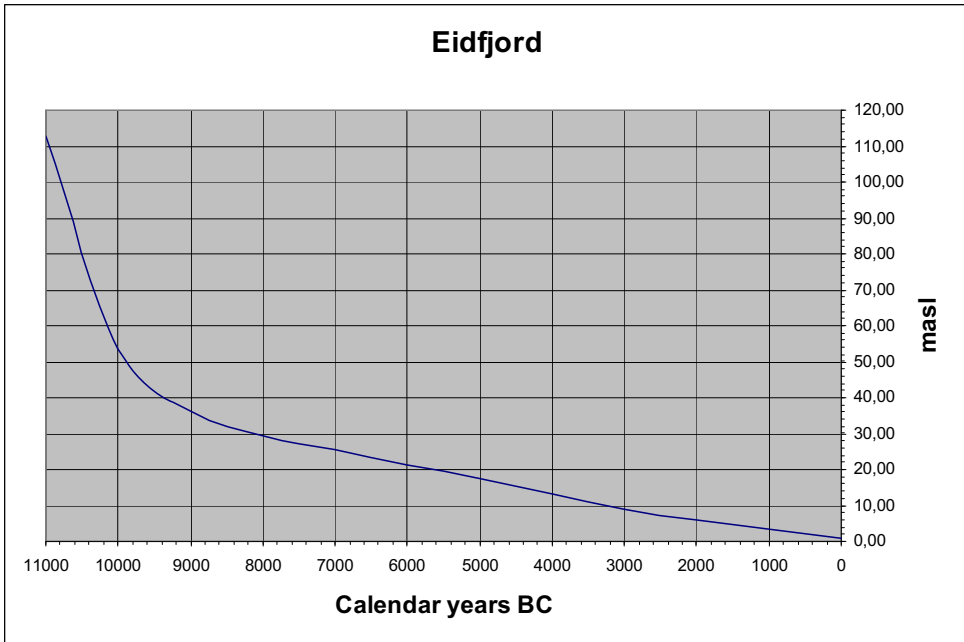


Figure 6 Shoreline diagram for Eidfjord, indicating that the shoreline was approx. 12 metres higher than at present at the beginning of the Bronze Age, around 1700 BC

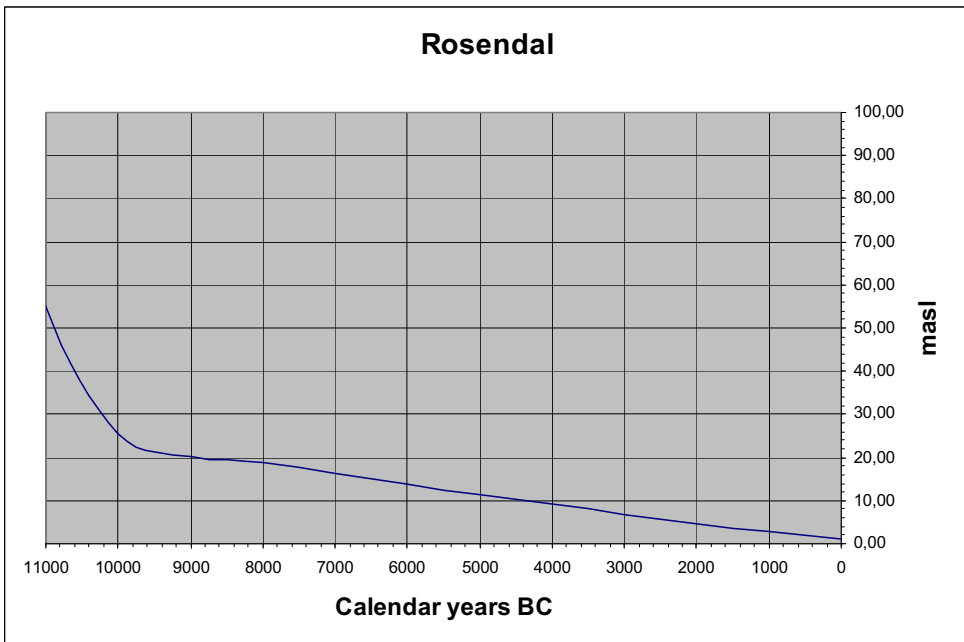


Figure 7 Shoreline diagram for Rosendal, Kvinnherad, indicating that the shoreline was approx. 8 metres higher than at present at the beginning of the Bronze Age, around 1700 BC.

4.2. Stone and bronze in the study area

The bronze objects pose a number of problems in terms of representativity. Many objects were probably melted and recycled in the Bronze Age (cf. Bakka 1963, 1993). Some artefacts may not have survived, for instance objects deposited in burial cairns. However, even when allowing for recycling and lack of preservation, the fact remains that there are few bronzes in west Norway, and no more than about 800-850 objects are known in Norway as a whole (Prescott 2005). This means that other materials were used for tools and other objects. Occasionally, wooden objects are found, such as the so-called head rest from Høstad in Central Norway, which was found together with several wooden bowls as well as vessels made from bark (Moe Henriksen 2008), so organic materials were used for making objects.

There appears to be a predominance of stone artefacts in the Bronze Age in West Norway. A number of stone artefacts can be dated to the Bronze Age in the study area, mainly type VI flint daggers (Lomborg 1959, 1973), stone axes, and arrowheads. I have mainly concentrated on the daggers and axes, as Bronze Age stone artefacts have generally not been subjected to study. Figure 9 and 10 give an overview of the artefacts, more details are found in the appendices. A number of stone axes are dated to the Bronze Age; in particular the so-called porphyry axes from the Late Bronze Age as well as polished shafthole axes (Glob 1938; Bakka 1955; Baudou 1960; Marstrander 1983). Shafthole axes were used over a long period of time, and particularly the Late Neolithic types appear to overlap with the Early Bronze Age (cf. Østmo 1977). However, the identification of these axes was not part of the objectives in this thesis and they have been left out. This requires a separate study altogether. Other stone artefacts have also been found: flint and quartzite scrapers, arrowheads, flint daggers, and debitage. Many such objects have not been recognised as being from the Bronze Age. The use of stone as raw material in the Southern Scandinavian Bronze Age has not been a major focus of study, even though it is well known that stone was used (but see e.g. Amundsen 2005; Högberg and Olausson 2005; Högberg 2009). Bronze is, it would appear, a more alluring material for researchers. There are three moulds, 33 bronze objects, and one gold object in the study area.

Artefact	Grave	Hoard	No information	Sum
Socketed axes	1	1	4	6
Shaft hole axes	-	5	-	5
Swords	1?	2	-	3
Spearheads	-	3	-	3
Daggers	3	-	-	3
Neck rings	-	4	-	4
Arm ring (gold)	-	1?	-	1
Razors	2	-	-	2
Button	1	-	-	1
Tweezers	1	-	-	1
Pins	1	2	-	3
Knife	1	-	-	1
Bronze fragment (unidentifiable)	1	-	-	1
Sum	12	18	4	34

Figure 8 Metal artefacts in Hardanger and Sunnhordland in relation to context

Museum number	Artefact	Farm	Municipality	Type	Period
C 16873	Flint dagger	Hardangervidda	Eidfjord	VI	EBA
B 5599	Flint dagger	Gjerde	Etne	VI b	EBA
B 6264	Flint dagger	Tufto/Hardangervidda	Odda	VI a	EBA
B 6508	Flint dagger	Fitja	Etne	VI a	EBA
B 7182	Flint dagger	Myklebust	Kvinnherad	VI a	EBA
B 7644	Flint dagger	Tokheim	Odda	VI a	EBA
B 7759	Flint dagger	Nervik	Etne	VI b	EBA
B 8093	Flint dagger	Vivelid	Eidfjord	VI b	EBA
B 8342	Flint dagger	Utne	Ullensvang	VI b	EBA
B 8382	Miniature dagger	Nedre Sekse	Ullensvang	VI a	EBA
B 9289	Flint dagger	Nes	Kvinnherad	VI a	EBA
B 10075	Flint dagger	Ølfernes	Kvinnherad	VI a	EBA
B 10227	Flint dagger	Josnes	Kvinnherad	VI a	EBA
B 10486	Miniature dagger	Øvre Sekse	Ullensvang	VI a	EBA
B 10763	Flint dagger	Statsallmenningen	Eidfjord	VI b	EBA
B 10846	Flint dagger	Fitja	Etne	VI b	EBA
B 11058	Flint dagger	Silda	Etne	VI a	EBA
B 12344	Flint dagger	Eide	Kvinnherad	VI a	EBA

Figure 9 Flint daggers in the study area

Museum number	Artefact	Farm	Municipality	Type	Period
B 75	Shafthole axe	Opedal	Ullensvang	Marstrander type E	LBA
B 2879	Grooved axe	Langeseter	Ullensvang	Solberg C2:1	LBA
B 4541	Shafthole axe	Ystås	Granvin	Marstrander type E	LBA
B4730	Shafthole axe	Ljones	Kvam	Marstrander type D	LBA
B 4918	Grooved axe	Unknown	Odda	Marstrander type F, R16, Solberg D2	LBA
B 5872	Shafthole axe, fragment/miniature	Eide	Granvin	Marstrander type B/D	LBA
B 6088	Shafthole axe	Tveit	Jondal	Marstrander type E	LBA
B 6203	Shafthole axe	Kråkevik	Ullensvang	Marstrander type E	LBA
B 6790	Shafthole axe	Raudstein	Kvinnherad	R37	LBA
B 7355	Shafthole axe	Norheim	Kvam	R37	LBA
B 7595	Shafthole axe	Nesheim	Granvin	Marstrander type E/R39	LBA
B 8694	Shafthole axe	Kaldheim	Etne	Marstrander type E/R39	LBA
B 8979	Shafthole axe	Gjerstad	Tysnes	R37	LBA
B 9917	Grooved axe	Sandsto	Ullensvang	Marstrander type F, Solberg D2	LBA
B 10086	Shafthole axe	Halleland	Etne	R37	LBA
B 10612	Shafthole axe	Vik	Sveio	R37	LBA
B 10764	Shafthole axe	Sæ	Eidfjord	Marstrander type E	LBA
B 10770	Shafthole axe	Sålesnes	Jondal		LBA
B 10810	Shafthole axe	Kvåle	Ulvik	Marstrander type D/R37	LBA
B 11680	Grooved axe	Åkra	Kvinnherad	Solberg C2:1	LBA
B 12139	Shafthole axe	Innbjoa	Vindafjord (Ølen)	R37	LBA

Figure 10 Stone axes in the study area

4. 3. Introduction to West Norwegian rock art

West Norway has a rich tradition of rock art, which is found in concentrations along the coast. In the county of Hordaland, rock art is found in two major concentrations, in Hardanger and in Etne municipality in the south, in the area known as Sunnhordland. The rock art consists mainly of pecked images, only two painted sites are known in Hordaland county, of which one painted site is found in the study area, at Årsand in Kvinnherad. Its date is uncertain, the Late Bronze Age or Early Iron Age are both possible. There are two traditions of rock art in

Scandinavia, “hunters’ art” dated to the Mesolithic and Neolithic (approx 6400-1700 BC) and “agrarian art”, dated to the Bronze Age. This distinction is based both on the chronology of the images as well as the presumed subsistence of the people who made the images: hunter’s art was made by hunter-gatherers, while agrarian art was made by people whose main subsistence was farming. Rather than using the terms hunter’s art and agrarian art, I prefer to use the terms Stone Age rock art and Bronze Age rock art, as I do not believe that the images are directly related to the forms of subsistence at the time they were made.

I define a site as a topographical area that contains one or more panels (cf. Mandt 1991:28) and a panel is defined as a stone or section of a stone outcrop that contains images (cf. Mandt 1991:27). A site and a panel may in some cases be one and the same, i.e. a rock outcrop that has images, for instance Fonnaland in Kvam municipality, while in other cases there can be two panels on one outcrop, for instance at Vangdal in Kvam municipality, and some sites consist of several stones or outcrops such as Børve 1-38 in Ullensvang municipality, where each outcrop is defined as one panel.

Two types of pecked images have generally been distinguished: cup marks and figurative rock carvings, such as ships, rings, anthropomorphic figures. Although cup marks are found together with figurative carvings, sites with cup marks only are frequently found in different locations, often causing them to be seen as a separate phenomenon. To my mind, this is an artificial division based more on what researchers have found interesting than actual differences. Cup marks have tended to be overlooked because they are difficult to date and because they are perhaps perceived as simple compared to the often impressive ship images. Figurative rock art is usually preferred for study, perhaps because the images are less abstract – they can be identified or interpreted as something, it is easier to look for narrative elements, and typologies make dating the images comparatively easier. Cup marks are in fact the most frequent motif in Scandinavia, along with the ship motif (Malmer 1981). Hence I will treat the cup marks and the figurative rock art as the same phenomenon. A detailed list of all sites and panels included in this study is found in appendix A, and is summarised in figure 12 below.

Municipality	Sites	Panels
Eidfjord	1	3
Etne	17	42
Fitjar	2	2
Jondal	3	8
Kvam	9	18
Kvinnherad	5	5
Odda	7	8
Sveio	2	2
Tysnes	2	2
Ullensvang	26	113
Ulvik	4	12
Ølen	4	11
Total	83 sites	226 panels

Figure 11 Number of documented rock art sites and panels in each municipality, including sites and panels that are dated to the Stone Age and some panels that have since been judged to be natural. Based on information in Adriansen 1996a, b; Gjerde 2000; Mandt Larsen 1972; Vevatne 1996, and the Askeladden database. See appendix A for more details.

Municipality	Figurative sites/panels	Cup mark sites/panels
Eidfjord		Læg Reid 1-3
Etne	Fitja 1, Fjøsna 1-5, Flote 1, Lunda 5, Støle 1, Vinje 1, 3	Flote 2-3, Haugen 1, Holsnanuten 1, Håland 1, Lunda 1-4,6, Lussnes 1-2, Skiftedalen 1-2, Tesdal 1-3, Tveito 1, Vinje 2, Volme 1, Øvernes 1-2, Øygarden 1-3, Øygardsflote 1-5
Fitjar	Vestbøstad 1	Skålevik 1
Jondal	Bakke 1-3,6,	Bakke 4, Tveiten, Sævarhagen 1-2
Kvam	Berge, Fonnaland, Linga 1,3, Rykkje 1-2 Vangdal 1-3 Vik 1	Linga 2, Nes, Vik 2-4, Vikøy Nystøl 1-2
Kvinnherad	Halsnøy Hammarhaug, Årsand	Husa, Åkra
Odda	Hagen, Holo 1-2, Opheim, Stana Ullshelleren	Horda Tokheimskaret
Sveio		Førde Røykjenes
Tysnes	Myklestad	Ve

Ullensvang	Aga 1, Børve 1-2,15, Frøynes, Hauso 1,3, Haustveit, Lutro 7 Ringøy 1-2	Aga 2-11, Bratt-Espe 1, Børve 3-38, Hauso 2, 4, Hansbu 1 Hesthamar 1, Hovland 1-6, Huse 1, Lofthus 1, Lote 1-5, Lutro 1-6, Meland 1-2, Midnes 1, Måkastad 1, Opedal 1-7, Reisete 1-2, Rogdaberg 1 Sandstå 1-3, Sekse 1-11, Tveit 1, Trones 1, Ullensvang 1, Utne 1-3
Ulvik	Hallanger	Hjelmavoll 1 Lekve 1-8 Ljono 1-2
Ølen	Nerheim, Svolland 1, Utboja 1-4	Utboja 5-6 Lunde Svolland 2-3

Figure 12 Rock art sites and panels in the study area.

Cup mark sites are found throughout the study area, but cluster in two areas: in Sørfjorden in Hardanger and in Etne (Mandt Larsen 1972; Innselset 1995; Vevatne 1996). In west Norway, many cup mark sites cluster at around 200-400 metres above the present shoreline, along the paths to summer farms and in good areas for pasture. Other sites are found higher up, 500-900 m.a.s.l., in areas that are used or have been used for pasture, and near farm buildings. Summer farms belong to a farm in the lowlands, in areas where the farmers let their animals graze all summer. Traditionally, dairy maids and shepherds would spend the summer months in the mountains to look after the animals, milk them, and make cheese and butter, and they needed shelter. It is not unusual to find postholes and activity areas dating from the Iron Age in these areas (e.g. Skrede 2002), for instance at Tokheim in Odda (Valvik 2000). This area is located high up in the mountains, and two rock shelters with Bronze Age activity, a boulder with 30 cup marks and several features dating to the Iron Age, Viking age and Middle Ages have been documented (Valvik 2000). Some panels in the mountain zone are in fact found in small rock shelters, or on boulders that form rock shelters, such as at Lote 4 in Ullensvang (Mandt Larsen 1972). Cup marks have been related to transhumance (Innselset 1995; Vevatne 1996)

from the Neolithic and onwards (cf. chapter five and seven below). Although there is a distinct pattern here, there are cup mark sites that are not located in the mountain area, but rather in the lowland, often near the shore. These are anomalies in a way; they do not fit the general picture of cup marks from the Neolithic and Bronze Age. There could be chronological reasons for this, or the sites could have a specific, local, significance. The point is not to lock the sites into one general model, but accept that there are very local variations that we cannot necessarily fully understand or explain.

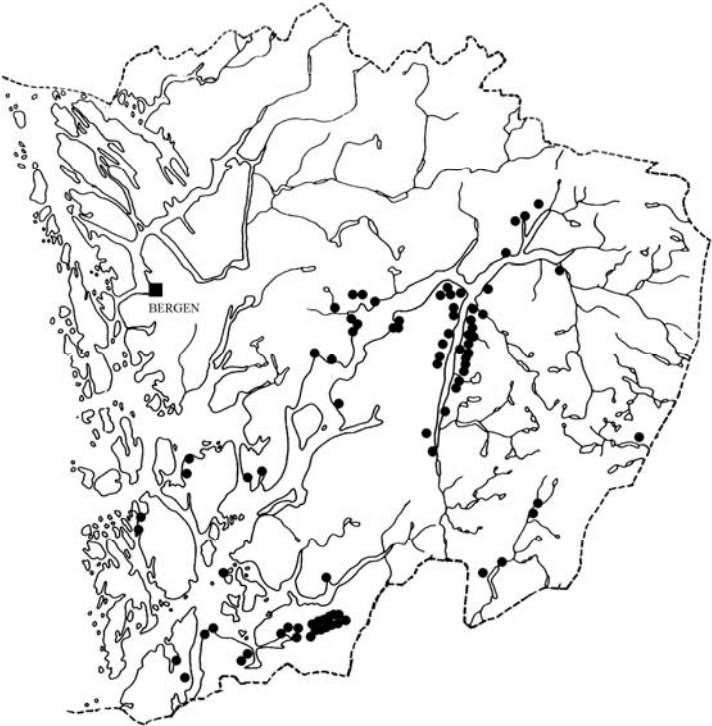


Figure 13 Map showing all rock art sites in the study area. Detailed maps are provided in chapter six.



Figure 14 Cup mark sites in the study area

Figurative rock art sites in West Norway are generally found near water, in locations approx. 10-30 metres above shore level, and this applies to both Stone Age and Bronze Age rock art. However, some figurative sites are found in other locations in the mountain zone far from the shore, e.g. the ship images in the rock shelters Vikshelleren (i.e. Vik 1) and Ullshelleren.

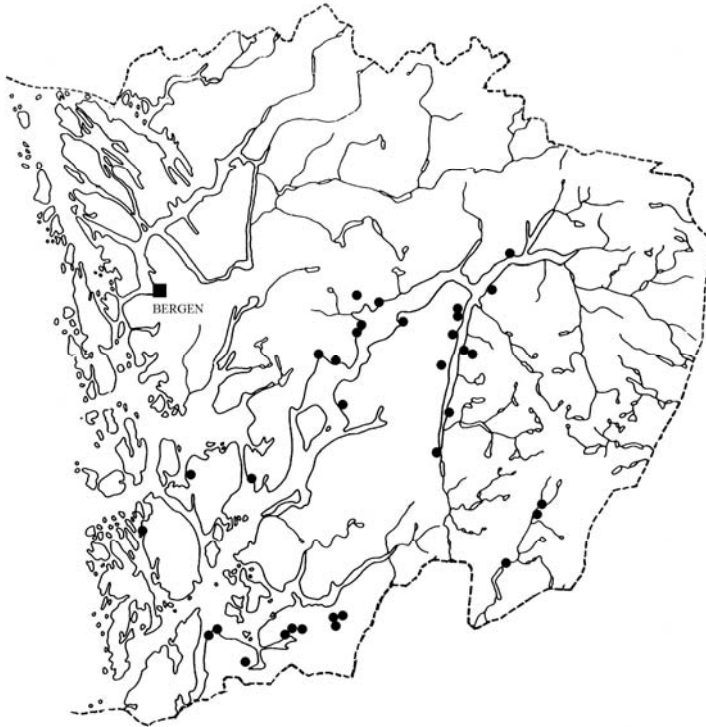


Figure 15 Figurative sites in the study area

4.3.1. Cup-marks

These are round or oblong depressions in the rock, sometimes connected by lines. They are found on slabs, stones, boulders, and outcrops, alone or combined with figurative rock art. Cup-marks are found in contexts dating from the Neolithic to the Middle Ages in Scandinavia, although they tend to cluster around the Bronze and Iron Ages (Innselset 1995, 2005; Mandt Larsen 1972; Mandt 1991; Vevatne 1996). There is a minimum of 1800 cup marks in Hardanger (Adriansen 1996a, b; Innselset 1995; Mandt Larsen 1972) and 719 in Etne (Gjerde 2000; Vevatne 1996). Including the rest of Sunnhordland and Vindafjord (Ølen), the total number of cup marks is 2671. New panels are found on a regular basis, and this number will undoubtedly change. These numbers should thus only be taken as an indicator, but it is clear that the cup marks outnumber the second largest group of images, the ships. In some cases the cup marks are connected by grooves, for instance at Sekse 3 in Ullensvang (Mandt Larsen 1972: PL 55a) and Tesdal 2 in Etne (Vevatne 1996: fig. 3.6). Usually, two cup marks are linked, forming a “double” or oblong cup mark. Cup marks can sometimes make up

patterns, there are many examples throughout Scandinavia of cup marks making up rows (e.g. Tegneby, Bohuslän in Sweden (Høgberg 1995)) or circles (e.g. at Lista, South Norway (Fett and Fett 1941)). In the study area, cup marks appear to form rows at some panels: Sandstå 1 (connected by a groove), Børve 15, Tveito 1.

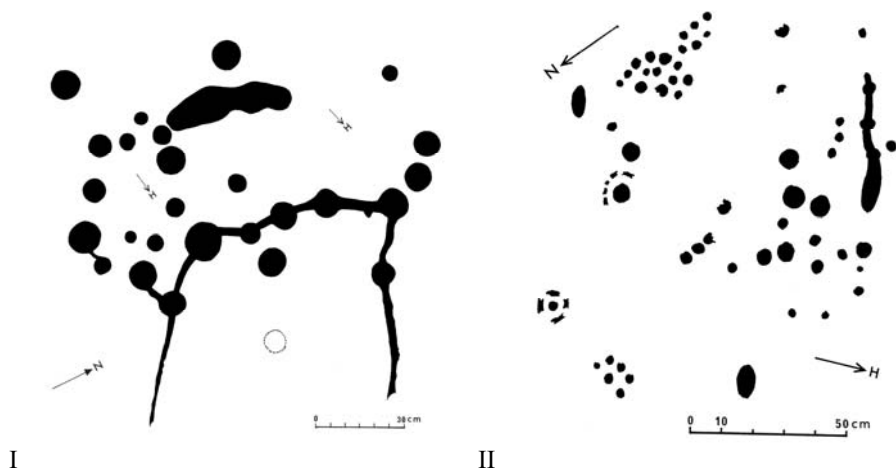


Figure 16 Cup marks: I: Sandstå 1 (Mandt Larsen 1972, Pl 55b); II: Sekse 3A (Mandt Larsen 1972, Pl 55a). Not to scale.

4.3.2. Ships

Ship motifs dominate in West Norway and comprise the second largest group of carvings, preceded only by cup-marks. There are 14 sites and 22 panels with a minimum of 221 ships in the study area, ranging from sites in the mountains (Børve 1, Ullshelleren rock shelter, Vik 1) to the shore. At Linga, 74 figures have been recorded, but only 12 can safely be interpreted as ships, the remaining figures are in all likelihood the remains of ships, but it is impossible to give a precise number as they are fragments. This problem also applies to other panels, several figures are too fragmented to be identified as ships, and the number of ships in this study is thus given as a minimum. The design of the ships varies, but there are certain elements that remain constant: the ships are either single lined, i.e. they have a keel line, or double lined, i.e. they have a keel and a gunwale. Crew strokes are usually present, but this varies. The degree of elaboration in terms of prows and any activity on the ships is highly

variable. In general the ships are less elaborate compared to ships in Bohuslän, Sweden, and Østfold, East Norway. Some ships are similar to ship types in Bohuslän, while other types appear to be regional or local, west Norwegian types, as will become apparent in the discussion in chapter five.

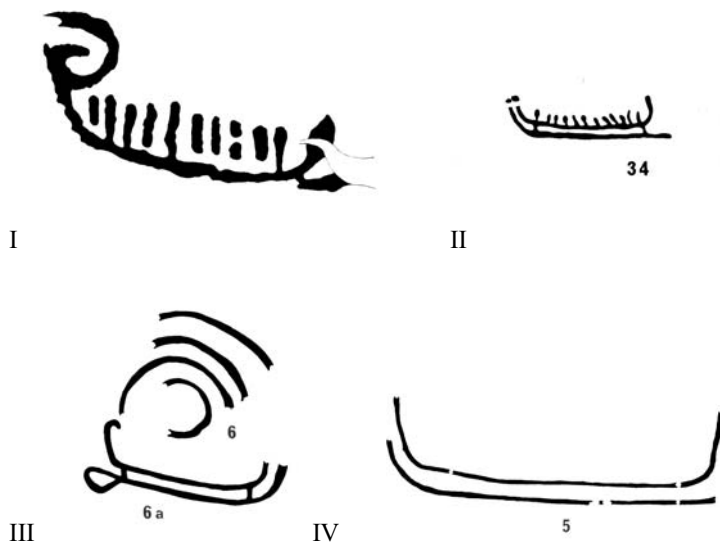


Figure 17 Ships in the study area: I: Vik 1 (Vikshelleren) (Mandt Larsen 1972, Pl.39b); II: Hammarhaug, figure 34 (Mandt Larsen 1972, Pl 21b); III: Fjøsna 1, figure 6a (Mandt Larsen 1972, Pl 5c; IV: Fjøsna 1, figure 5 (Mandt Larsen 1972, Pl 5b). Not to scale.

4.3.3. Anthropomorphic images

Depictions of humans are relatively uncommon in West Norway, compared to other regions in Scandinavia. However, at Bakke, Jondal, there are several humans, and the majority appears to form three processions. There are two processions at Bakke 1, and one procession at Bakke 3 (Coles 2003; Mandt 2005a). Several of the humans are in pairs connected by grooves, and these pairs are often interpreted as *hieros-gamos*, i.e. couples engaged in ritual sexual activity, often seen as a depiction of a fertility god and goddess (Almgren 1927; Fari 2006). Humans are depicted very simply, as stick people with no defined torso or legs, sometimes phallic. Heads are usually marked by a small cup mark or by a rounded extension at the end of the “torso”. At Bakke 1, two figures have small beak-like horizontal extensions, reminiscent of the beaked figure at Leirfall in central Norway (Marstrander and Sognnes 1999:81, figure 107) and on the slabs in the Kivik burial in Sweden (e.g. Randsborg 1993).

Including the processions, there are 37 depictions of humans among the carvings in the study area.

Footprints are considered as anthropomorphic images, and these are more common than depictions of humans, with a total of 114 figures. Footprints are found alone or in pairs at figurative sites; in some cases, they dominate a site, such as Børve 2 (Mandt Larsen 1972: PL 46,47a), where they are the only motif and at least 44 figures are recorded. There is some variation: the footprints can be contoured or solidly carved, there can be a line crossing the foot, and toes are sometimes marked. The images depict naked feet as well as shoes. The footprint from Hagen in Odda municipality has marked toes, three crossing lines, and is incised rather than pecked. One hand print is known at Holo 1 in Odda, a footprint with toes is found at Holo 2 (Mandt Larsen 1972: PL 41a, b). A depiction of a hand and arm is known at Utbjoa 3 in Ølen. The solidly carved footprints may resemble oblong cup marks, and it is possible that there is a link between the two motifs (Vevatne 1996:71-72). They are often found in combination with cup marks, such as at Hauso 1 and 3 in Ullensvang (Mandt Larsen 1972: PL 49a-c).



Figure 18 Anthropomorphic images in the study area: I: Procession at Bakke 1 including a possible animal depiction ((Mandt Larsen 1972, Pl.30; II: footprint at Fjøsna 2 (Mandt Larsen 1972, Pl. 6c). Not to scale.

4.3.4. Zoomorphic images

Depictions of animals dominate in Stone Age rock art, in particular red deer. There are seven depictions of reindeer or red deer on two panels dated to the Stone Age, Rykkje and Vangdal 2 in Kvam (Haugen 2007). Animal depictions among Bronze Age rock carvings are rare in the study area. At Bakke, Jondal, there is a possible depiction of a dog; four carvings that resemble dogs are found at Flote 1, Etne. There is an animal depiction at Haustveit, Ullensvang, it appears to be tied to a ship and could possibly be a depiction of a horse (Mandt

Larsen 1972, Pl 50-52), and there are two possible animal images on the panel that cannot be identified. A horse is depicted at Ullshelleren, bringing the total to seven animals.

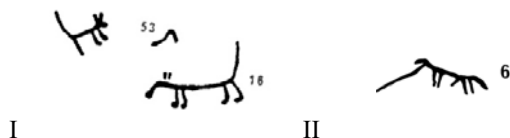


Figure 19 Animal depictions. I: Flote 1, figure 16 and 83, and possible depiction of an axe, figure 53 (Vevatne 1996, Pl. 6), II: Haustveit A, figure 6 (Mandt Larsen 1972, Pl. 50). Not to scale.

4.3.5. Plant motifs

A rare motif in West Norway, seven depictions of plants or trees are found at Flote 1 (Mandt Laarsen 1972; Vevatne 1996; Gjerde 2000).

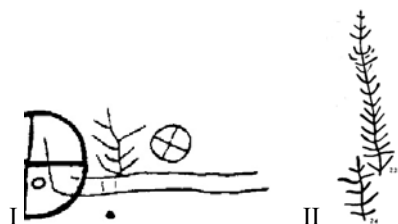


Figure 20 Plant motifs in the study area. I: Flote 1, figure 76-78, tree onboard ship and II: Flote 1, figure 23-24 (Vevatne 1996, Pl 6). Not to scale.

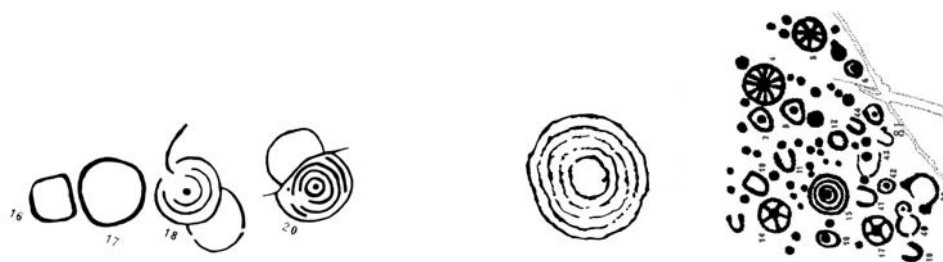
4.3.6. Geometric motifs

Geometric motifs are especially prevalent at sites in Etne, such as Flote 1, Vinje 1 and Støle (Mandt 1972, PL 11, 14, 18), although they are found on most sites in the study area. For the purposes of this thesis, I have placed the geometric motifs within the following categories, based on Mandt Larsen 1972, Mandt 1991 and Vevatne 1996: 1. rings and concentric rings, 2. rings with radials, 3. complex rings, 4. Ovals and u-shapes, 5. spirals, 6. other geometric motifs.

Category 1, rings and concentric rings, also includes cup-and-rings, which are known mostly in Etne: Flote 1, Stødle, Vinja, but also at Bakke 1, Børve 15, Sekse 3, and Berge in Hardanger. Concentric rings are found at Flote 1, Fjøsna 1, Fitja, Støle, Vinje 1, Aga, Berge and Frøyenes. The most common motif within category 2 is rings with four radials forming a

cross, the so called “wheel-crosses”, or “sun-wheels”. These occur throughout the study area. Some rings have more than four radials; these are all found at Støle in Etne, where four rings with five, six, seven, and 11 radials are documented (Mandt Larsen 1972; Vevatne 1996). All have cup marks in the centre. One concentric ring at Støle has one radial (Vevatne 1996:90). Complex rings are rings that combine several elements, e.g. concentric rings with four radials, U-shaped appendages, rings with four radials and four cup marks, combinations of radials, rings, and cup marks and so on. The most unusual motifs in this category are several rings at Haustveit and at Flote 1 (Mandt Larsen 1972: PL 50, 51, 52a; Vevatne 1996: PL 6). One of the rings at Haustveit has an inner ring with four radials surrounded by a larger ring and V-shaped lines that form a “star”. A similar ring is found at Flote 1. At Bakke 1, two concentric rings have a large almost circular appendage. At Opheim, a ring contains a cross and four cup marks (Mandt Larsen 1972; Pl 40b). Ovals and U-shapes make up a category of motifs that are concentrated in Etne, at Flote 1, Støle and Vinja 1, although some are found in the rest of the study area, at Hallanger, Bakke 1, 3, and Årsand. These are oval rings and U-shaped grooves, sometimes with a cup mark inside. There are five spirals at Flote 1, including a double spiral, and one spiral at Berge. The final category includes motifs that are square or rectangular (Flote 1, Bakke 1, Årsand) and triangular (Årsand).

A total of 226 geometric images are recorded in Hardanger and Sunnhordland.



I

II

III

Figure 21 Geometric images. I: Bakke 1, fig 16-20 (Mandt Larsen 1972, Pl.30), II: Aga 1 (Mandt Larsen 1972, Pl. 44a), III: Støle 1 (Gjerde 2000:114, fig. 7.145). Not to scale.

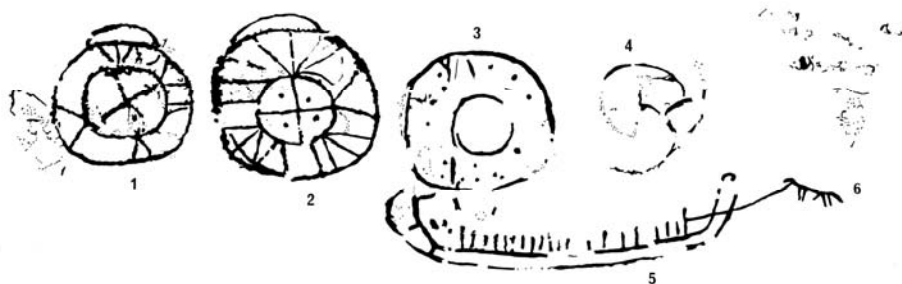


Figure 22 Complex rings at Haustveit, panel A (Mandt Larsen 1972, Pl.50).

4.3.7. Unidentifiable motifs

This category consists of motifs that cannot be identified or interpreted. Some motifs consist of curved lines, or lines that appear to belong together, but make no sense to the modern observer. Examples are collections of lines at Haustveit, Årsand, and Vangdal 1, a curved line with branches at Vinje 1 and the curious image on the slab from Myklestad (B 10067) that resembles runes (Mandt Larsen 1972: Pl 18, 23, 24a, 37, 51). In addition, many lines are likely to be fragments of images that have eroded. This is a difficult category, as the images are either fragments, and therefore cannot tell us much, or a collection of lines that do not make much sense to us. For this reason they are not an important part of the analysis.



Figure 23 Rectangular image on a slab from Myklestad (B 10067). Drawing based on Mandt 1972, Pl. 24b.

Cup marks	Ships	Anthropomorphic	Zoomorphic	Plants	Geometric
2671 (min)	221 (min)	151	7	7	226

Figure 24 Minimum number of motifs in the study area

4. 4. Graves

The two main types of burial monument in the study area are mounds and cairns. Some mounds are found in Sunnhordland, i.e. in the border area between the counties of Hordaland and Rogaland. In the rest of the study area, cairns are the predominant type of burial monument. Mounds are a typical element of the Danish Bronze Age cultural tradition, and the Rogaland area has generally been seen as a northern periphery of this tradition (e.g. Bakka 1993; Solberg 1994). Mounds are the dominating type of monument in Rogaland, and this could be seen as an indication that the area was indeed part of the Danish tradition. Another explanation could be that in Rogaland and parts of Sunnhordland (Etne and Ølen), the landscape is relatively flat and open and more suited to agriculture. In the northern parts of the study area, this was not the case, and a functional reason could be that there was not enough soil and turf to build mounds. A third reason is that the stone used for the cairns was significant in itself. Towards the end of the Late Bronze Age and into the Pre-Roman Iron Age, small or unmarked burials became more common. There was also some degree of re-use of older monuments as evidenced by secondary burials.

Cairns from the Bronze Age are usually located near the shore, usually on promontories and sometimes on islands. They tend to be relatively large, with a diameter of at least 8 metres, and a height of 1-2 metres. Most cairns have been disturbed during farm work or road construction. Early Bronze Age burials are characterised by a large rectangular cist, usually in the centre or just off-centre, typically about the length of a person, around 1.5-2.0 metres by 0.5-0.7 metres wide and sometimes wider in one end than the other. The chamber is dry walled, often with a slab at either end as well as a covering slab; sometimes it consists solely of slabs. The burials were mainly inhumations. Unfortunately few such burials in the study area have been professionally excavated, and very little bone material has been preserved. Only one excavated cairn has yielded bones, a cairn at Eide, Kvam (Shetelig 1910).

The burial practices underwent substantial changes in the course of the Bronze Age, and cremation was introduced at the end of the Early Bronze Age (e.g. Lorange 1876:32; Shetelig 1925; Brøgger 1925; Kaliff 1997; Linge 2007). There is little evidence of cremation in the study area at this time; however, as bone material has rarely been recovered from Early Bronze Age burials, it is not possible to ascertain this. Two cremations from the Early Bronze Age are known, from Garahaugen barrow in Etne (Myhre 1972, 1977; Vevatne 1996) and the

cairn at Rimbereid in Fitjar (Østerdal 1999). The cremation practice is evident in the Late Bronze Age. The bones are usually deposited in an urn or pot, frequently together with the ash and charcoal, and in some cases bronze objects. The burial chambers are smaller, usually around 0.5-0.7 metres in width and length, although this can vary. They are built of slabs, often as secondary burials, in which case they are typically found near the edge of the cairn or barrow.

Hundreds of cairns are found in the study area, but dating them is highly problematic, as cairns from the Early Iron Age often have identical locations and similar construction. If the cairn has not been disturbed or excavated, it is impossible to get an accurate date. This problem also extends to the shape and size of the cists. Burial chambers from the Roman period can be large, 2-3 metres in length and thus hard to distinguish from Early Bronze Age chambers. However, the early chambers are usually well made and the technique is more refined, the stones and slabs are carefully laid and the maximum length is no more than around 2 metres. A good example is the chamber at Hommandeneset at Nordhuglo (Bakka 1972). Some Early Iron Age burials also have small chambers with cremated bones deposited in urns. Here, the pot can give a date of the burial chamber. The available records at the Museum of Bergen often mention that cairns were opened or destroyed and that clay pots and bones were found and thrown away. As long as we have no pottery that can be identified and dated, the cairns could date to either the Late Bronze Age or the Early Iron Age. The degree of available documentation is varied, some graves have been excavated, in some cases the information has been retrieved from the farmers, and in most cases there is no information other than the location of the monument and sometimes a reference to finding a clay pot that was thrown away. I have excluded all burials where the information is sketchy, i.e. where the only information is that a pot was found. As it has been impossible to determine the date of these burials, although the location might indicate a Bronze Age date, they have been left out of the analysis.

A construction detail that is found in many Bronze Age graves is the presence of one or more interior walls, which usually surround a central burial. Such rings or walls are known from several mounds and cairns dated to the Bronze Age in Rogaland county (e.g. Nordenborg Myhre 1998; Syvertsen 2003, 2005) and in Nord-Trøndelag county (Grønnesby 2009), as well as in other parts of Scandinavia (e.g. Goldhahn 1999). The rings seem to have been in use

from period 2 to 4 (Østerdal 1999:65). Interior rings or walls are thus one dating criterion. Cairns with interior rings are also present in the study area, in several cairns at Hystad, Stord and at Tjernagel, Sveio; these will be presented in more detail below. A second detail is that many cairns from the Bronze Age were built using round stones collected from the shore. However, this also applies to Iron Age cairns to some extent and is thus not a secure criterion, although it could be seen as an indication. A third criterion is the construction and size of the cists. As mentioned above, Early Bronze Age cists measure up to 2 metres in length, and are constructed either from slabs or stones with flat sides facing inwards, or using flat stones to dry wall the cist, often with slabs or large stones as gables. The cist is covered by one or more slabs. The bottom may consist of a slab, but often the cist is set on the rock or stones. Late Bronze Age cists consist of slabs, usually four slabs set on top of a bottom slab and covered by one or more slabs. In some cases the cist has no bottom slab and is set directly on the rock or stones in the cairn. The size varies from around 1 metre to around 0.5 metre in length, and the cists are rectangular or square.

How can we determine the date of the cairns that do not contain datable material? I have used location and construction details in order to determine which graves are likely to be Bronze Age. Location is one key element. Although Iron Age graves may have the same location, they can also be found further away from the shore, closer to the farm. This is not the case with Bronze Age cairns. The monuments are located on promontories, in prominent positions with a good view of the sea, or on small islands, in the shore zone, often near a steep drop into the sea. Egil Bakka has estimated that there are at least 100 cairns from the Bronze Age in Hardanger alone (1955:47), based on location. Eighteen cairns have a secure Bronze Age date, either through objects found in the burial or through construction details (figure 4.28. below).

4.4.1. Graves dated to the Bronze Age

In this section the graves that can be securely dated to the Bronze Age in the study area will be presented. The secure dates are based on the dating criteria mentioned above, and on finds of datable material, either objects or radiocarbon dated organic material. For this reason the graves will be presented in some detail (cf. Appendix B).

The Garahaugen mound at Sørheim in Etne is dated to the Early Bronze Age based on two radiocarbon dates of charcoal samples from two burial chambers. The monument consisted of an inner cairn covered by a mound of sand and soil. The cairn was built on top of an earthen platform. Near the edge of the mound there was a kerb consisting of two rows of stone encircling the cairn, and there were no stones between the cairn and the kerb (Magnus and Myhre 1970:3). The excavators concluded that the monument originally was a mound surrounded by the kerb, and that it was enlarged at some later point, covering the kerb (ibid: 6). A chamber made from slabs and measuring 0.75 x 0.35 metres was found in the central cairn, containing a mixture of soil, sand and clay, cleaned cremated bones and charcoal; it had also been disturbed by treasure hunters. The charcoal was dated to 3330±80BP/1460-1300 cal BC (T 858), placing the chamber in period 2. A second grave consisted of cremated bones and charcoal between some stone slabs in the mound, interpreted by the excavators as a burial (Magnus and Myhre 1970; Vevatne 1996:31) and dated to 3030±70 BP/1150-1010 cal BC (T 959). A possible burial from the Pre-Roman Iron Age (B 12050a) was found near the edge of the mound, consisting of pottery shards. According to a survey conducted by Egil Bakka in 1956, the northern edge of the mound had been disturbed and a small empty cist made from slabs was found (Bakka 1956). A cooking pit and several ard furrows were found underneath the earthen platform, charcoal from an area near the pit was dated to 3080±20/1210-1050 cal BC (T 860). There is a discrepancy in the dates of the samples taken from underneath the central cairn and the primary chamber, and Bjørn Myhre argued that a likely explanation is that the wood used for the cremation could have been old (Myhre 1972:15). The radiocarbon dates thus indicate that the monument must be from period 2-3. It is possible that a dagger dated to period 2-3 (B 12690), came from the primary chamber (Magnus and Myhre 1970:18-19; Vevatne 1996:32), as the person who sent it to the museum indicated that it was found in a chamber containing charcoal, soil and cremated bones (Fett 1968:140), and this information is consistent with the chamber in Garahaugen.

Lundahaugen was located about 50 metres from Garahaugen. Originally it had a diameter of 15-20 metres and was surrounded by a ditch (Fett 1963a:20; Myhre 1977:16) but at the time of excavation it was severely disturbed and ploughed out. The monument consisted of a central cairn surrounded by several rings of stones and covered by a mound (Indrelid 1969; Myhre 1977:16). The remains of a chamber built from slabs were found in the centre of the cairn; it had been destroyed by grave robbers, but must have been about 2 metres long and 0.7 metres wide and should thus indirectly be dated to the Early Bronze Age. However,

underneath the mound a layer of soil containing charcoal was uncovered, and a radiocarbon sample gave 2940 ± 130 BP (T 1278), while a sample taken from a cooking pit that was uncovered gave 3750 ± 90 BP (T 1280) (Myhre 1977:17).

The Nesjarøysi cairn at Utne in Ullensvang is dated to the Early Bronze Age based on a dagger dated to period 2-3 (B 8088) as well as the construction of the cist. The cairn had a diameter of about 15 metres and the height in the centre was that of a man (Bøe 1930), i.e. about 1.5-2 metres. It was located at the top of a slope around 15 m.a.s.l. and 40 metres from the present shore. The cairn was removed during farm work, but the museum was contacted when a dagger was found while the cist was being removed. When Johs Bøe examined the remains of the cairn, the cist was still visible. The cist was made of slabs and one of the slabs forming the longest side measured about 2.2 metres, so that the cist must have been about 2 m long. There was no bottom slab, instead the bottom consisted of round beach pebbles, and Bøe concluded that it must have been built directly onto the contemporary shore, as the beach pebbles were not restricted to the cist, but could be seen underneath the entire remains of the cairn (*Ibid*). Based on the size of the cist and the dagger, the cairn is dated to the Early Bronze Age, period 2-3.

A dagger was also found in a cist in a cairn at Hommandeneset on Huglo island, Stord. The cairn was never excavated and the cist is now broken due to vandalism. The cairn is located on an outcrop that drops steeply into the sea, it is built around the outcrop and as large amounts of stone have been removed, it would originally have been larger and higher (Bakka 1972:95). In 1885, a cist was found in the cairn, built into a depression in the rock; it measured 2 metres and was 0.4 metres wide. The cist was dry walled using flat stones, the chamber so well-made that even “a mouse could hardly have gotten inside” (Lunde 1885; my translation). Inside, a dagger (B 4299) dated to period 2 was found on the left side of the cist. In addition, a chin bone was found at one end (Bakka 1972:96); it has not been preserved. The bottom was covered by beach sand. The dagger, bone, and construction of the chamber clearly indicate an Early Bronze Age inhumation.

The large cairn at Rimbareid in Fitjar has been dated to the Early Bronze Age based on a bronze sword that is reputed to have come from the chamber (Fett 1973b:11-12; Østerdal 1999:45). Sometime between 1785 and 1795, the cairn was opened by a local innkeeper. He found a sword, a dagger, and charcoal. The sword B 1825 was given to the museum in 1866

with information that it had been found in a cairn near Fitjar church. It is probable that the sword is identical to the sword found in the cairn (Fett 1973b:12; Østerdal 1999). The ash that was found in the cist indicates a cremation, which would date the chamber to period 3, correlating with the date of the sword.

At Hystad, Stord, several cairns have been surveyed and excavated. One of these (Figure 25, no 7) has a chamber about the length of a person, dry walled using small flat stones. There were no finds as the cist had clearly been opened “long ago” (Bakka 1958a; 1972:97). In addition there were two concentric walls; the inner wall consisted of small flat stones, while the outer wall consisted of large stones. Both walls had façades, facing outwards in relation to the central cist. Close to the outer wall a bone and pieces of a bucket-shaped pot (B 11181) from the Early Iron Age were found scattered among the stones, probably the remains of a secondary burial. The presence of inner walls and the size of the cist as well as the technique with which it was made indicate a Bronze Age grave. A cairn (appendix B) that was excavated in 1971 in this area contained a cist and a wall (Fjelltveit and Jansen 1971). The cairn was built against an outcrop, and from this two walls consisting of flat stones were found. A row of stones was found between the walls, parallel to the outcrop and thus making up a rectangle. The walls seemed to have a façade, as the flattest sides of the stones faced outwards. Inside, a cist measuring 2 x 0.6 metres and constructed of slabs, was found. There was a concentration of charcoal between the cist and the northern wall, but nothing was found inside the cist. No radiocarbon dates are available. The inner wall and the cist both indicate a Bronze Age date (Bakka 1972:97-98), and the rectangular shape rather than a ring as is usual, can probably be explained by the fact that the outcrop was incorporated in the construction.

Two cairns on either side of Valevågen bay at Hystad were excavated by Egil Bakka in 1958. The first (figure 25 no 13) contained an empty central chamber constructed from large stones with flat sides facing inwards; there was no bottom slab, the cist was constructed on rock. It had been opened at some point; the covering slab lay next to the cist, which was filled with soil and small stones. Although no artefacts or bones were found in the cist, an Early Bronze Age date is likely. An inner core surrounded the cist, ending in a wall that had an outward façade (figure 26). The wall had a maximum height of 1.25 metres; it was built on bedrock and on the original ground. This inner wall was rhombic. Bakka interpreted this as the first phase of the monument, a house-like building with straight walls (1972:101). Outside and next to the wall, four small chambers constructed from slabs were found. One of the chambers

(cist 2) had been constructed before the second phase of the monument, when stones were added outside the wall. Three chambers were set into the added stones, two contained urns and cremated bones. The urns are of Late Bronze Age type; close parallels are Baudou 1960, type B3, plate XX and Müller 1891, plate XVI, no. 246, dated to period 5-6. Cist 3 was located 1 metre to the north of cist 2. When opened, shards of a grave urn, cremated bones, and shells (common limpet, lat. *patella vulgata*) were found (B 11183). The excavator believed the shells had been placed on top of the bones in the urn (see figure 101, chapter seven). The cist was placed 25-30 cm above the bottom of the cairn, and was clearly a secondary burial. Cist 4 was located slightly to the west of cist 3. This was also a small cist, measuring 30-35 cm, 24-26 cm deep. The cist contained an urn of LBA type, decorated with stamped fingernail marks (B 11182). The urn contained badly preserved cremated bones; there were also bones on the bottom of the cist; these are likely to have ended up there through animal activity (Bakka 1958a). Cist 5 was built outside the wall, measuring 25-35 cm and built around a large stone. The cist was undisturbed when it was opened, but no finds were made. The second cairn (figure 25, no 15) was built on and around an outcrop and had been severely damaged by grave-robbers, so a central chamber was not found. However, an inner wall with a façade facing outwards was discovered, and set next to this was a small chamber made from slabs. Inside, the bottom was covered with fine sand, and a period 4 bronze razor (B 11184) was found. Some cremated bones were found underneath the bottom slab.

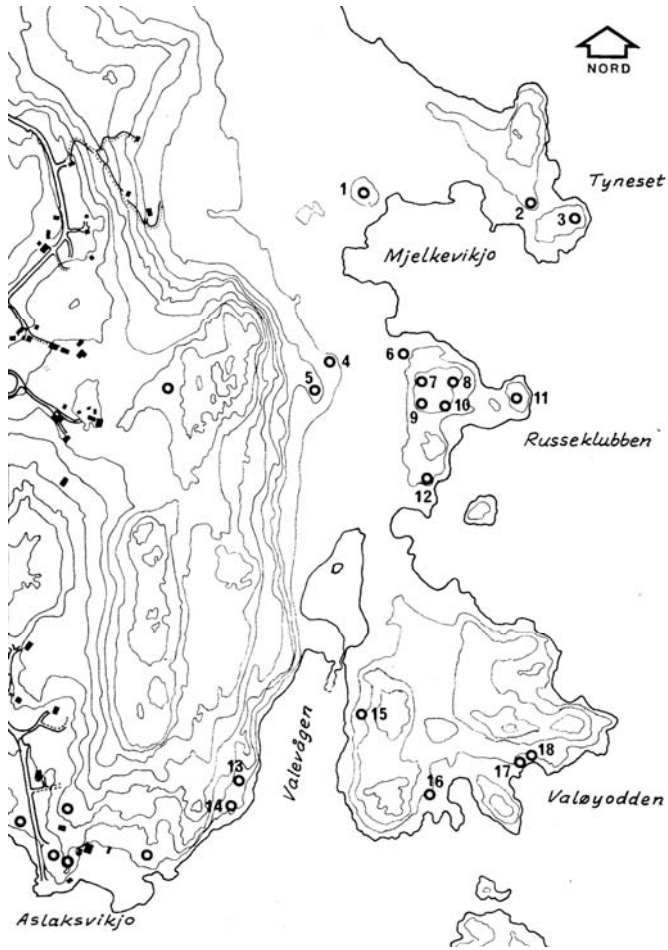


Figure 25 Map of the Hystad area and graves. After Bakka 1972:94.

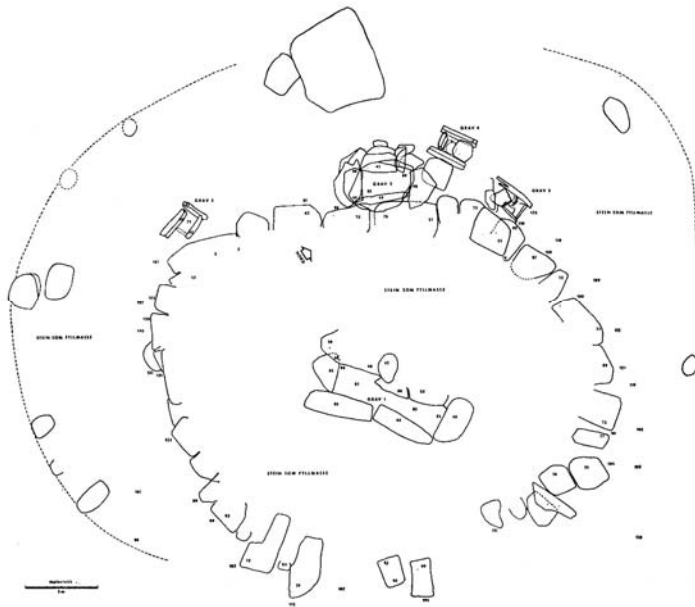


Figure 26 Drawing of cairn no. 13 at Hystad, showing the outline of the inner wall and the positions of the cists. Cist 1 is in the centre, cist 2-5 are located clockwise from left to right. Drawing by Egil Bakka, Bergen museum archives (published in Bakka 1972).

This pattern of an Early Bronze Age chamber and secondary chamber from the Late Bronze Age is also apparent in the graves at Eide, Kvam, excavated by Haakon Shetelig in 1905 and published in 1910. Two cairns were excavated here; both were built on an outcrop on the edge of a cliff that drops into the sea. One cairn was severely damaged and contained one empty small chamber, 0.6 x 0.37 metres, where the bottom was covered by small beach pebbles (Shetelig 1910). The remains of the cairn were excavated in 1967 (Rolfsen 1967); in the course of the excavation the remains of a chamber made from slabs was found four metres from the edge. The length was 1.7 metres and the width 0.6 metres. Cremated bones (B 12021) were found inside and around the chamber along with small beach pebbles, no charcoal was found.

The second cairn was located nearby. Some boys were playing and throwing stones from the cairn into the sea when they stumbled upon a chamber where they found a human skull. The boys threw the skull into the sea, but the find was reported to the Museum in Bergen and prompted the excavation. The chamber was 2 metres long and 0.65 metres wide, the gables consisted of one slab each, while the rest of the cist was dry walled. The bottom consisted of

stones and was evened out with small beach pebbles. Inside, several bones were found, as well as a bone from a dog (Shetelig 1910: 6-7). The bones were not in an anatomically correct position and Shetelig attributed this to animal activity as the cist was undisturbed and too small for a person to get inside (*ibid*:7). Some bark was found, otherwise there were no other finds. A second chamber was found near the southwest edge of the cairn; it was empty and measured 1.4 metres in length, the width was 0.6 metres and 0.4 metres, being wider at one end. It was dry walled using flat stones but for one end, which was a slab. The bottom consisted of round stones. Slightly off-centre a third chamber was found, built from slabs. No measurements are given by Shetelig; he mentions that the cist was covered by two slabs and that the upper slab measured 1.10 x 0.57 metres. Inside, two clay pots were found, one of which was broken and in disintegration, and both contained cremated bones. A small bronze object was found near the western side, underneath the bones, and appeared to have been placed there rather than having fallen out of the broken urn. Unfortunately, the object was too damaged to be identified, but Shetelig thought it could have been a knife (*ibid*: 9). Small beach pebbles were strewn across the bottom slab. The broken urn has a parallel in Rygh's figure 141 (Rygh 1999 [1885]), while the second urn is of a type that is dated to the Late Bronze Age, period 5-6 and has a parallel in Baudou's type XXVIII C1 (Baudou 1960, plate XX). It is conical with a rounded mid-section which is decorated with a line pattern, and the neck is cylindrical. There is no rim, and the pot had a handle which must have been broken before it was set in the grave as there was no corresponding shard (figure 27). The first chamber suggests an Early Bronze Age date for the cairn and as the second chamber was similar in construction it is likely to have a similar date. It is somewhat unusual to find such chambers close to the edge of the cairn, but there is a parallel in the cairn at Hommandeneset, where the cist was close to the edge. The third chamber is securely dated to the Late Bronze Age, through the date of the urns.

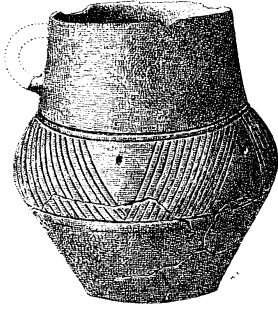


Figure 27 Urn from Eide, Kvam. Reworked after Shetelig 1910.

The cairn at Tjernagel, Sveio, was excavated in 1983, uncovering an inner cairn or platform consisting of stone and soil, measuring 10 x 0.75 metres (Ringstad 1985: 111). Cist 1 was set into the platform so that the top of the cist was even with the top of the platform; it contained three layers of soil corresponding to the layers identified in the platform. It measured 1.75 x 0.2-0.3m and was 0.35-0.5 m deep, consisting of two slabs on either side and one slab at either gable. It was covered by slabs in several layers and was filled with soil, and the three layers were identified here as well. A charcoal sample from layer 3 was dated to $3790 \pm 120 \text{BP} / 2340 \pm 200 \text{BC}$ (T 5503), i.e. to the Late Neolithic. However, the charcoal was collected from the entire layer, rather than being taken from a concentration, and thus it is hard to say what context is actually dated here. A sample taken from underneath a stone that supported the wall of the cist gave $1900 \pm 100 \text{BP} / 55 \pm 115 \text{AD}$ (T 5504), the Pre-Roman Iron Age. The excavator interprets the cist to have been contemporary with the inner cairn, as there were no cuts indicating that it was inserted at some later point (Ringstad 1985:120). The soil layers inside the cist contained some flint, mussels, a crab claw, a fragment of coarse pottery (B 13820). A *Littorina Littorea* shell was found between two layers of covering slabs. Another radiocarbon sample was taken from the bottom of the platform, giving $2070 \pm 80 \text{BP} / 170 \pm 210 \text{BC}$ (T 5505), i.e. The Pre-Roman or Roman Iron Age. However, there is some uncertainty as to which layer the sample was taken from (Ringstad 1985: 133). Cist 1 could in principle be Bronze Age, built at the same time as the platform, which is a characteristic we have seen at Garahaugen in Etne. Cist 2 was located in the centre of the cairn, on top of the platform. It was dry walled from flat stones, and measured 1 m x 0.3-0.45 m. The bottom consisted of the top of layer 3 and the cist had not been filled in. Stones were packed tightly around the cist and the excavator concluded that the second phase of building the cairn started at this point, by filling in stones and covering the platform. Two burnt human bones were

found next to or under the centre of the northern side wall. A possible burial was encountered 0.5 m underneath the cist: a concentration of burnt bones, charcoal and a flint knoll. 200 bone fragments were found, most were human, and 6 were sheep/goat. A radiocarbon sample gave 2900 ± 70 BP/ 1165 ± 135 BC (T 5502). This puts the concentration in the late Early Bronze Age or beginning of the Late Bronze Age; this is also the best sample as it was taken from a clear concentration. The human bones were from an individual who was 14-21 years old. In the northern part of the cairn which faced the sea, a 13 m long wall was uncovered, 1-3 m from the outer edge of the cairn, so as to enclose the platform. It was fragmentary and consisted of flat stones set on top of large round stones. Stones were filled both inside and outside the wall, and the excavator's interpretation is that the wall was built at the same time as cist 2, as this part of the cairn only consists of stone. In addition, stone-filled ledges below the cairn were examined and found to be intentional, so as to make the cairn more monumental. The outline of the cairn seems to have followed the shape of the rock. The excavator found it hard to date the monument because of the two samples from the Iron Age, and interpreted the monument as an Iron Age monument, built using soil from a settlement site from the Early Neolithic and Bronze Age, including material from a Bronze Age burial (Ringstad 1985:134-35). However, the Bronze Age date came from a concentration of bones, and if this material came from an older grave then I find it improbable that the re-deposited material could have been as concentrated as this, unless it was moved intentionally from an earlier grave. It is curious that there was no cist here, but this could be a local variety or even a one-off. Thus my interpretation is that the grave originally was an Early Bronze Age cremation surrounded by a stone ring, possibly also with cist 1, and a second phase of the monument was completed in the Early Iron Age with the construction of cist 2 and the cairn.

Several cairns have burials that can be securely dated to the Late Bronze Age. Many were excavated by Eyvind De Lange in the early 20th century (De Lange 1913). At Kalveidet sound at Vespestad, he excavated a cairn in 1905 and discovered two cists. The first cist was located five metres from the western edge, built on the bottom of the cairn and consisted of slabs. It measured 1 x 0.6 metres, and on the bottom slab ash, large pieces of cremated bones, and three bronze objects (B 5962) were found: a pin, a button, a knife and outside the chamber, close to the bottom slab, one half of a pair of tweezers (De Lange 1905). Another 2.5 metres further in, De Lange found a cist about 2 metres long and built of stones with flat sides that faced inwards, and the bottom was covered with small beach pebbles. The bronze objects are dated to the Late Bronze Age: the pin is dated to period 4-5 (Baudou's type B2b, plate XVI),

the button is period 4 (Baudou's type A2a, plate XVIII), the knife is likely a razor and a close parallel is Baudou's type x1 B4b, plate VIII, dated to period 4-5. The pair of tweezers could date to anything between period 3 and 5, although period 5 is the likeliest in view of the other objects. The objects date the chamber to period 5, and I find it likely that the second chamber is earlier and can be dated to the Early Bronze Age.

At Skålavik, not far from Kalveidet, De Lange excavated a damaged cairn. In the centre he found the remains of a cist, which contained shards of a pot – an open bowl that has a parallel in Madsen 1872, plate 43, figure 26 and is dated to the Late Bronze Age (De Lange 1913). Shards of a second pot were found spread in the cairn; this pot was of the same type but was somewhat smaller (B 6638).

De Lange also excavated a partially damaged cairn at Rossnes promontory at Breivik farm in Fitjar. Close to the edge he found a small cist measuring 0.75 x 0.45 metres, made from slabs. Inside, there were shards of four vessels (B 6273): shards of two vessels and cremated bones were next to the southern gable, a vessel was placed next to the eastern side, and an urn containing cremated bones was placed in the centre of the cist (De Lange 1913). The cist was also half-filled with soil. Egil Bakka reconstructed one of the vessels from the shards (1955:67), a low bowl with some decoration consisting of a triangular line pattern and indicating a Late Bronze Age date (Bakka 1955; Østerdal 1999).

Another grave that De Lange excavated was located at Gjerstad in Tysnes, located on the highest point of a promontory. Two cists were found. A small cist was found close to the edge, measuring 0.55 x 0.25 metres. It was empty save for a thin layer of soil that contained one small cremated bone and nut shells. A second cist was found nearby, it was 0.5 x 0.4 metres and contained a broken urn (B 6757) which has a parallel in Müller 1891, figure 246, and is almost identical to the urns found at Hystad, dated to period 5-6. There was a thin layer of soil and nut shells in this cist as well, indicating that both chambers are from the same period, the Late Bronze Age (De Lange 1914).

A cairn at Sydnes in Kvinnherad, containing a small cist, was examined by Bjørn Myhre in 1983. The cairn is located on an outcrop close to the sea. The cist contained pottery shards, cremated bones, and a piece of cord. A small excavation was conducted in 1986 (Auestad 1986), when more shards and bones as well as fragments of shells were found underneath the

bottom slab. A bone sample was sent for radiocarbon dating, but unfortunately there was not enough material for a date. The pot had a handle, the bottom was round, and there was a belt of decoration from the rim to the shoulder, consisting of bands of horizontal lines, oblique lines forming triangles and finally a band of vertical lines. A parallel can be found in Broholm (1946:137, grave 1751; cf. Østerdal 1999:60), and a likely date is period 5-6.

The Olahaugen mound in Etne was used as a gravel pit and only a quarter was left when Shetelig excavated the mound in 1912. A cist containing an urn with cremated bones (B 6592) had been found here. The cist was square and measured about 0.4 metres and it was set on the bottom of the mound. The bones had been cleaned before deposition in the urn. A shard from a second urn was found in-between the slabs, and charcoal was found on and underneath the bottom slab, as well as outside the cist. Several cists had previously been discovered when gravel was removed, and Shetelig was given some shards. The urn is very simple, conical and the bottom is flat, and is dated to the Late Bronze Age (Shetelig 1912a, 1913; Fett 1968:142; Nordenborg Myhre 1998:127).

Finally, Kyrkjehaugen at Grindheim in Etne was ploughed out and severely damaged when a small cist was discovered. Inside, there was an urn containing cremated bones and a bronze razor (B 7656), of a type dated to around period 4 -5. The cist was located off-centre in the mound, and measured 0.5 x 0.25-0.30 metres, filled with soil and charcoal. The urn was placed in the centre of the cist. It has a handle at the rim, the neck widens to the shoulders, and the body is conical with a flat bottom, similar to Baudou's type XXVIII B3, plate XX which is dated to period 6, but the urn from Kyrkjehaugen has a shorter neck. The razor is similar to Baudou's type XI B 1c, plate VII. The urn and the razor date the grave to period 5-6.

A more recent find is a cairn at Ugddal in Tysnes, in an unusual location. The cairn is not found near the sea, but further inland in a small valley, in the more fertile areas of Tysnes. It was excavated in 2004, and according to the report it was severely damaged. A small chamber was found, set into a natural depression of the rock, and cremated bones and pottery shards were found. The bones were radiocarbon dated to cal BC 930-840 (Handeland 2005:3).

Museum number	Municipality	Site	Date	Dating indicators
-	Stord	Hystad	EBA	Interior wall and cist (Bakka 1972)
-	Tysnes	Uggdal	LBA	Radiocarbon date to Cal BC 930-840 and pottery shards (Handeland 2005)
B 1825	Fitjar	Rimbareid	EBA	Location, construction of cist, period 3 bronze sword (Fett 1973b; Østerdal 1999)
B 4299	Stord	Hommandeneset	EBA	Period 2-3 dagger, drywalled cist (Bakka 1972)
B 5932 B 12021	Kvam	Eide	EBA - LBA	Inhumed bones in a dry walled cist. Also small cist containing two clay urns and an unidentifiable bronze object (Shetelig 1910).
B 5962a-d	Fitjar	Vespestad	LBA	Cist containing charcoal, cremated bones, razor, knife, button and tweezers from period 4-5 (De Lange 1905, 1913).
B 6273	Fitjar	Breivikjo	LBA	Shards of several urns, cremated bones (De Lange 1908, 1913).
B 6592	Etne	Olahaugen, Støle	LBA	Two small chambers, one urn with cleaned bones and shards from two other urns (Shetelig 1912a)
B 6638	Fitjar	Skålevik	LBA	Shards of small pot found in a small chamber, shards of a similar pot found spread in the cairn (De Lange 1913).
B 6757	Tysnes	Gjerstad	LBA	Clay urn, period 5-6 (De Lange 1914)
B 7656	Etne	Kyrkjehaugen, Grindheim	LBA	Small urn containing a razor and cremated bones, in small chamber (Fett 1968).
B 8088	Ullensvang	Nesjarøysi	EBA	Period 2 dagger, large cist (Bøe 1930)
B 11181	Stord	Hystad	EBA	Long dry walled cist and two interior walls (Bakka 1972).
B 11182 B 11183	Stord	Hystad	EBA- LBA	Decorated urn and cremated bones in small cists, interior wall and central dry walled cist (Bakka 1958, 1972).
B 11184	Stord	Hystad	LBA	Period 4 razor in small chamber, interior wall (Bakka 1958, 1972)
B 12050a-m B 12690	Etne	Garahaugen Sørheim	EBA	Radiocarbon dates from the primary chamber 3330±80BP/1460-1300 cal BC (T 858), and a secondary burial 3030±70 BP/1150-1010 cal BC (T 959). B12690, period 2-3 dagger, may have come from this grave (Magnus and Myhre 1970).
B 12054a-b	Etne	Lundahaugen, Sørheim	EBA	Radiocarbon dates of charcoal under the monument: 2940±130 BP (T 1278) and cooking pit also under the mound: 3750±90 BP (T 1280) (Myhre 1977).
B 13626 B 14262	Kvinnherad	Sydnes	LBA	Small cist containing decorated and undecorated pottery shards and cremated bones (Myhre 1983; Auestad 1986).

B 13820	Sveio	Tjernagel	EBA	Radiocarbon date of concentration of cremated bone and charcoal: 2900±70 BP/1165±135 BC (T 5502) near bottom of central platform (Ringstad 1985)
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Figure 28 Graves dated to the Bronze Age and dating indicators. Museum number is given where available.

A cairn at Aslaksvikjo at Hystad at some distance from the cairns described above was excavated in 1885 by I. Ross, who found a chamber measuring 1.8 metres in length, dry walled using flat stones built directly on the rock. It appeared to have been opened and was empty save for a few unburned bones. Ross also visited the cairn at Hommandeneset, and was struck by the similarities between the two cists (Bakka 1972:95). The cairn was located on an outcrop near a drop to the sea, like the other cairns dated to the Bronze Age at Valevågen bay. In 1976 the cairn was excavated and removed (Ågotnes 1976). More unburned bones were found around the chamber (B 12546). A second chamber was found near the edge, and charcoal, burned bones and shells (blue mussels) in close proximity. No radiocarbon dates are available, however, I would not rule out a possible date to the Bronze Age.

Museum number	Object	Farm	Municipality	Date
B 1006	Socketed axe	Seim	Odda	Period 3
B 1825	sword	Rimbareid	Fitjar	Period 3
B 4299	Dagger	Nordhuglo	Stord	Period 2
B 5962a	Pin	Vespestad	Fitjar	Period 5
B 5962b	Button	Vespestad	Fitjar	Period 5
B 5962c	Tweezers	Vespestad	Fitjar	Period 5
B 5962d	Knife blade	Vespestad	Fitjar	Period 5
B 7656b	Razor	Grindheim	Etne	Period 4-5
B 8088	Dagger	Utne	Ullensvang	Period 2
B 11184a	Razor	Hystad	Stord	Period 4
B 12690	Blade	Sørheim	Etne	Period 2-3

Figure 29 Bronze objects from burials in Hardanger and Sunnhordland.

A socketed axe (B 1006) from period 3 was apparently found in a cairn around 1841 at Seim, Odda (Lorange 1876:41). No information about the cairn or the cist is available.

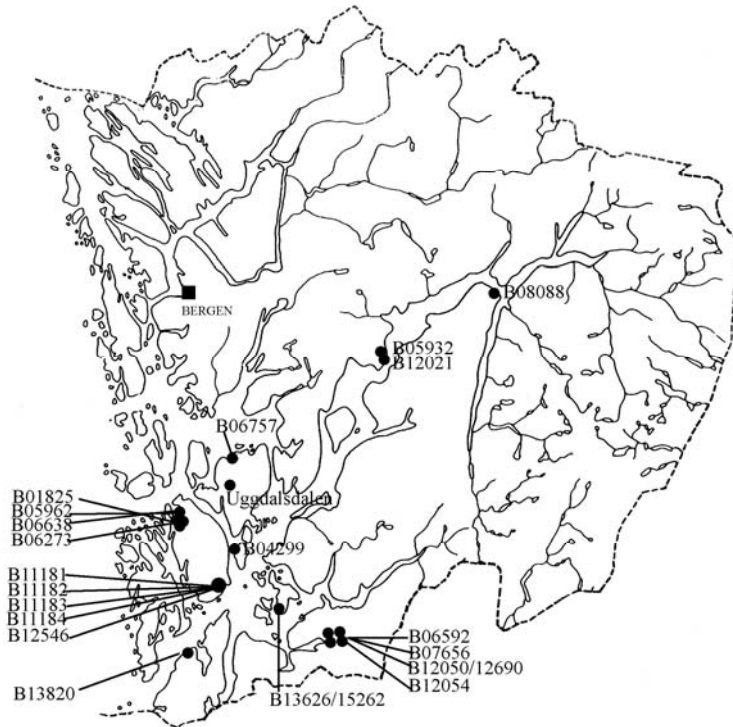


Figure 30 Graves from the Bronze Age

The graves discussed above indicate both similarities and differences, and thus it is hard to point to one specific characteristic that could be used as a dating criterion. What the cairns do have in common is their location: they are built on rock outcrops that are close to the sea, on promontories and often near the edge of cliffs or sheer drops into the sea. This is not an absolute criterion, as Iron Age graves may also have this location, but as such graves are often found in infields, near farmhouses, the location favours a Bronze Age date. The graves in Etne differ; they are located on terraces and both Garahaugen and Lundahaugen were located close to the edge of the terrace, in dominant locations – and on land previously used for cultivation.

The burial practices are varied: in some cases, the cists were filled with soil or sand; in several cases bones were found underneath and around the cist; in two cases the bones and bronze objects were not deposited in an urn, but were spread on the bottom of the cist. Several cairns had inner walls or rings enclosing a central chamber, a feature that is also found in Rogaland and Central Norway. Several cairns also contained rounded beach pebbles. In some cases, the

bones were cleaned before deposition, and it is worth noting that the amount of bones found in the cremations described above is relatively small, possibly indicating that only a portion of the cremated bones were deposited (cf. Petré 1984; Bennett 1987; Dommasnes 1997, 2001; Brück 2009). Cremation is introduced in the study area in period 3, based on the dates from Garahaugen and Rimbareid, and if we accept that the construction of Tjernagel started in the Early Bronze Age, this also contains a period 3 cremation.

4.5. Votive deposits

A number of finds in the study area have been found in contexts that cannot be related to settlements and burials. These objects have been found near boulders, rock outcrops, in cracks, in springs, rivers and bogs, and are usually interpreted as votive deposits or hoards. Votive deposits are defined by some as sacrifices to supernatural forces, and the sacrificed objects are not reused later (Johansen 1993). Categorising a find as a votive deposit is an interpretation of the find context, and could lead to circular arguments so that objects that are found near a boulder are always interpreted as votive. Further, such labels say nothing about the intentions and actions that were connected to the depositing of an object. Scandinavian archaeologists tend to view deposits as votive offerings, and have mainly been concerned with identifying and categorising these. There has been less interest in non-ritual hoards, mainly because few have been identified, especially in Norway. These are hoards consisting of broken bronze objects, smelting debris, ingots etc. Because few such objects have been found in the first place, and those few have been found in settlement or workshop contexts, such hoards have generally not been discussed.

Votive deposits are divided into several categories: multiple objects and single objects that are found in contexts on dry land or in water: rivers, lakes, and bogs (Mandt 1991; Kleiva 1996; Melheim 2006). Deposits are found in two main contexts in Hardanger and Sunnhordland:

1. related to stone: under or near stone boulders, rock outcrops, in cracks, between or under stones in screes.
2. related to water: in bogs, lakes, rivers, brooks, springs.

There are variations within these categories; objects might have been formally arranged, or wrapped in organic material such as bark, textiles etc, or placed in containers (Kleiva 1996; Mandt 1991; Lødøen 1995). There is no evidence to suggest that intentionally deposited objects in the study area were wrapped or placed in containers – if they were, the organic material has not been preserved.

There are relatively few hoards dated to the Early Bronze Age in the study area. Four decorated bronze shaft-hole axes have been found in springs; three were found in the same spring at Lunde, Vindafjord (Ølen), and may have been deposited at the same time. The axes are dated to period 2. A similar axe was found near a spring at Rimbareid, Fitjar, and is dated to period 2. A few artefacts have been found in peat bogs, such as a spearhead from period 3 found at Nesbø, Fitjar (B 6759), a period 2-3 spearhead from Hiksdaal, Vindafjord (Ølen) (B 12196), and a sword blade (B 4954) from period 2 at Sørvoll, Bømlo. A flint dagger (B 10763) was found in an old ford in a river, and could possibly be interpreted as a deposit. Stone related contexts from the Early Bronze Age are rare. A Fårdrup-type shaft-hole axe (B 3389) was found in the ground near a “mountain”. Although the information is unclear, this could very well be a votive deposit placed near a rock outcrop.

The amount of votive deposits in the study area increases in the Late Bronze Age. In stone-related contexts, there is one large find at Vikedal, Kvam. Under a large rock, pieces of several neck rings and two pins with plates were found (B 6877a-e). A spearhead (B 5940) was found in a hilly and rocky area at Tjeldflot, Etne which can be interpreted as a stone-related context. An unfinished stone shaft-hole axe was found in a layer of clay under a large boulder in a scree (B 7595). A sword (B 1008) was found in a crack in the rock 450 m.a.s.l. at an old summer farm (Fett 1956c). One find from Støle, Etne, appears to be a combination of wet and dry contexts: A neck-ring (B 9097) dated to period 5 was found in a peat bog while digging ditches, placed on a stone in a layer of soil beneath the peat. It must have been visible for a long time before it was covered by peat (Fett, E. 1968:145). One stone shaft-hole axe has been found in a wet context: B 4730 was found in the sea, just off a promontory at Ljones, Kvam. Øystein Johansen (1993) has classified the find as a votive deposit. However, the axe was found while fishing and the possibility that the axe was lost cannot be ruled out. These axes are usually considered as ceremonial axes (cf. chapter 6), so it is certainly possible that the axe could have been thrown into the sea intentionally.

B-number	Object	Farm	Municipality	Date
B 1008	Sword	Lekve	Ulvik	Period 6
B 3389	Shafthole axe	Årekol	Ullensvang	Period 1 B
B 4730	Shafthole axe	Ljones	Kvam	Period 4-6
B 4954	Blade	Sørvoll	Bømlo	Period 2
B 5940	Spearhead	Tjeldflott	Etne	Period 5
B 6759	Spearhead	Nesbø	Fitjar	Period 2-3
B 6877a	Neck ring	Vikedal	Kvam	Period 6
B 6877b	Neck ring	Vikedal	Kvam	Period 6
B 6877c	Neck ring	Vikedal	Kvam	Period 6
B 6877d	Pin	Vikedal	Kvam	Period 6
B 6877e	Pin	Vikedal	Kvam	Period 6
B 7364	Flanged shafthole axe	Rimbareid	Fitjar	Period 2-3
B 7595	Shafthole axe	Nesheim	Granvin	LBA
B 9097	Neck ring	Støle	Etne	Period 5
B 10300a	Flanged shafthole axe	Lunde	Ølen	Period 2-3
B 10300b	Flanged shafthole axe	Lunde	Ølen	Period 2-3
B 10763	Flint dagger	Statsallmenningen	Eidfjord	Period 1
B 10999	Flanged shafthole axe	Lunde	Ølen	Period 2-3
B 11805	Socketed axe	Hiksdal	Ølen	Period 5-6
B 12196	Spearhead	Hiksdal	Ølen	Period 2-3

Figure 31 Finds that can be classified as votive deposits, both wet and dry contexts

This brief presentation shows two tendencies: first, that objects that were included in deposits in the Early Bronze Age were related to men: axes and swords as well as the occasional flint dagger, and second, that in the Late Bronze Age, objects related to women, jewellery, were included, although “male” objects were still being deposited. Male and female objects can be found in both wet and dry contexts. This pattern can be found in other regions in Norway and Scandinavia, and some researchers have interpreted this in terms of a shift where female objects were offered because women had gained more status and wealth was now shown through women, rather than men (Kristiansen 1986, 1998; cf. Skogstrand 2006). To my mind, it is hard to argue along these lines where Hardanger and Sunnhordland are concerned, as the data are relatively limited, and only two finds of presumed female jewellery have been found (B 6877a-e and B 9097). The depositional practices in the study area do not appear to differ from those documented elsewhere in Norway and Scandinavia.

4.6. Settlement evidence

Bronze Age settlements are known in the study area, but they are not numerous. There is some evidence of fossilised fields, as well as cooking pits and postholes. A growing number of sites with Bronze Age dates have emerged, such as recently excavated sites at Aga, Flatebø

and Skåla. The explanation for the low rate of settlement sites in the study area can probably be sought in the fact that the available, fertile land has been continually used, so that farmsteads that were cleared and taken into use in the Bronze Age were also used in the Iron Age, thus disturbing or destroying any earlier traces. In addition, few rescue excavations have been undertaken in the area in recent years, so there is reason to believe that further development in some parts of Hardanger could result in new knowledge of settlement patterns in the Bronze Age. However, in the last 20 years or so, several settlement sites with layers dating to the Bronze Age have been discovered during surveys and have been excavated. Unfortunately, only a small number of excavation reports are available, consequently I have only included sites where reports are available for study (figure 32).

B-number	Municipality	Site	Date	Dating indicators
B15178	Bømlo	Kobbavågen lok 6, Spissøy	LBA-PRIA	Radiocarbon date to 2530±150 BP/ cal BC 820-405 (Beta-78706) (Kristoffersen and Warren 2001)
B15182	Bømlo	Store Skiftesvika, lok 69, Spissøy	LN-EBA	Rock shelter, radiocarbon dates to 3540±50 BP/ cal BC 1900-1750 (Beta-72872) and 3130±60 BP/cal BC 1500-1395 (Beta-95513) (Kristoffersen and Warren 2001)
B15403	Etne	Tjelmeland	EBA	Asbestos pottery, two radiocarbon dates: 3060±35 bp/cal BC 1415-1165 (T-11970) and 2995±35 bp/cal BC 1265-1143 (T-11971), cultural layer in test pits (Kutschera 1995).
B15667	Fitjar	Fitjar	EBA-LBA	Cooking pits, bifacial flint arrow with concave base, radiocarbon dates from three cooking pits: 3020±50 BP/cal BC 1400-1110 (Beta-110359), 2590±90 BP/cal BC 795 (Beta-119798), 2580±120 BP/cal BC 790 (Beta-119799) (Vevatne 1997; Johannesen 1998)
B16359	Kvinnherad	Flatebø	EBA-LBA	Postholes and ard furrows, charcoal sample from posthole dated to 2960± 70 BP/cal BC 1390-970 (Beta-210540) (Slinning 2007)
B16155- B16159, B16202- B16210	Kvinnherad	Kvitevoll	EBA-LBA	Postholes, ditch (one sample dated to 3110±40 BP/cal BC 1420-1380 (Beta-198118)) and cultivation layer – one layer dated to 3660±40 BP/cal BC 1410-1310 (Beta-196170), asbestos pottery, possible bronze casting (Engedal et al 2006)
B16556	Kvinnherad	Skåla, Rosendal	EBA-LBA	Postholes/houses, radiocarbon dates from postholes: 2475±35 BP/cal BC 765-425 (TUa-4843), 2485±40 BP/cal BC 765-515 (TUa-4842) (Birkenes 2004). Five houses from the EBA, four houses from the LBA, cooking pit (Handeland and Diinhoff in prep). Radiocarbon dates from postholes: 3450±40 BP/cal BC 1880-1670 (Beta-249038), 3390±40 BP/cal BC 1760-1610 (Beta-249045),
B15211	Stord	Nautøysundet, lok 50, Føyno	LN-PRIA	Bifacial arrowhead with concave base, radiocarbon date of indefinable structure to

				1970±100 BP/cal BC 5-cal AD 210 (Beta-78815) (Kristoffersen and Warren 2001)
B15291	Stord	Nauteysundet, lok 116, Nautøy	LBA-PRIA	Posthole with radiocarbon date to 2980±100 BP/cal BC 755-375 (Beta-74482) (Kristoffersen and Warren 2001)
B15201	Stord	Kjøttvika, lok 37, Nautøy	LN-BA-PRIA	Bifacial heart-shaped arrow, lancet-shaped arrows usually dated to the LN and BA, plus radiocarbon dates from three hearths: 2010±70 BP/cal BC60-cal AD 75 (Beta-91277), 2240±50 BP/cal BC 380-195 (Beta-91276), 2280±50 BP/cal BC 375-190 (Beta-91279), 2170±50 BP/cal BC 350-150 (Beta-91278) (Kristoffersen and Warren 2001)
B16108 B16491	Ullensvang	Aga	LN-IA	Fossilised field, one sample radiocarbon dated to 3460±90 BP/cal BC 1940-1520 (Beta-211723), cooking pits with early Iron Age dates (Berge 2008), two samples taken during survey gave 3400±80BP/cal BC 1755-1535 (T-16559) and 3235±95 BP/cal BC 1615-1410 (T-16560) (Jenssen 2003)
-	Ullensvang	Opedal	LBA	Cooking pits (Iron Age?) and mould for LBA axe (Bakka 1963)
-	Jondal	Sævarhelleren Vasselhelleren		Two rock shelters with layers dating from the Neolithic to the Iron Age, including layers dated to the Late Bronze Age.

Figure 32 Excavated settlement sites in the study area (see chapter six below for more details)

The excavated settlement sites have dates ranging from the Late Neolithic to the Iron Age, and it is likely that many sites from the Iron Age were also in use in the Bronze Age. Evidence from archaeological excavations in other parts of West Norway has revealed a number of houses dated to the Late Neolithic and Bronze Age (Diinhoff 2005, 2007), and confirm the general pattern of continuity in terms of location of settlement from the Late Neolithic to the Iron Age in West Norway (cf. chapter six below).

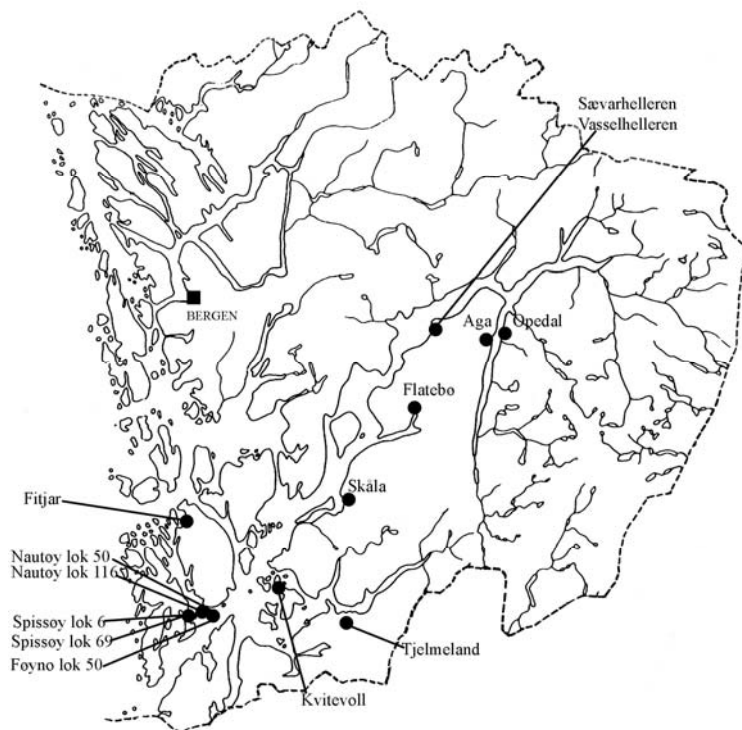


Figure 33 Excavated sites with Bronze Age dates in the study area.

Recent excavations in several rock shelters revealed layers dated to the Bronze Age in one particular shelter, Sævarhelleren, which is located about 200 metres as the crow flies to the north of Bakke. This rock shelter was used in several phases from the Mesolithic to the Iron Age (Bergsvik 2008), and the excavation uncovered a layer containing bones from domestic animals – cattle, sheep, goats, and some pig bones (Hufthammer 2008:221) – as well as fire-cracked stones and several pits. The date is the Late Bronze Age (Bergsvik pers. comm. 2009). Another shelter, Vasselhelleren, located about 200-300 metres northeast of the panels at Bakke, also contained layers dated to the Late Bronze Age (Bergsvik pers. comm. 2006). These rock shelters are discussed further in chapter six.

Other indications might be the Late Bronze Age porphyry axes, which Marstrander (1983) related to settlements or hamlets. However, in the study area they are mainly stray finds and cannot be directly related to settlements. Whether there is a correlation between these axes and settlements is debatable, as some axes in other part of Scandinavia and Northern Europe have been found in burial contexts as well (Glob 1938:46, 48; Baudou 1960). The shafthole

axes have not been used, and some appear to have been damaged during production. Flint daggers could also indicate settlements or activity areas. A type VI dagger was found in an old field not far from the Nesjarøysi cairn from period 2 described above, and could perhaps indicate a settlement or field.

The Bronze Age in West Norway is a prehistoric period that we know comparatively little about. However, new information has emerged as a result of recent excavations, providing a wider basis for suggesting interpretations. The archaeological material presented above is varied and despite the fact that it is not plentiful, we still have a base for conducting a spatial and temporal analysis.

Chapter Five: The chronology of rock art

This chapter focuses on the chronology and typology of the rock art in the study area. As seen in chapter four, few graves have been securely dated to the Bronze Age, and that is also the case for settlement sites. Bronze and stone objects are other chronological markers, but rock art is the largest group of archaeological material and it is ironically also the best chronological marker, despite the fact that it can be hard to date accurately. The main focus in this chapter will be the ship, its typology and chronology. This is because it is the dominant identifiable and interpretable motif in the study area; it is the only motif that does not remain static but that changes continuously. The most numerous motifs are the cup marks, and both cup marks and geometric motifs are other foci of the chronological discussion. My objective is not to create a new chronological typology for West Norway, rather, this exercise is meant to place the figurative sites with ship images within a timeframe and hence to create a starting point for the development of a historical trajectory for the sites in question.

5.1. Dating rock art

There are several methods for dating rock art, but even though dating methods have been refined in recent years, rock art cannot be dated absolutely. Some methods provide relative dates, such as shoreline displacement curves, comparison with decoration on dated bronze artefacts, dating based on excavations in front of and around rock art panels, and typology (Mandt 1991; Kaul 1998; Bengtsson 2004). The methods I have used are comparison with decorated bronze artefacts found in dateable contexts, comparison with images in other regions in Scandinavia, typology, relating the sites to shore line displacement curves, and excavation results where available.

Few rock art sites have been excavated in West Norway, and few of these have given any conclusive evidence. A problem is that it can be difficult to relate any finds to the images unless these are covered by datable material. For instance, test pits in front of Berge, Kvam, revealed the remains of three hearths, radiocarbon dated to the Pre-Roman Iron Age (Lødøen 2005). This only tells us that there was some activity here in the Pre-Roman Iron Age, but does not date the images directly. Likewise, a small excavation in front of Vinje 1 revealed

charcoal, flint and a Late Neolithic flint arrowhead close to the boulder on which the panel is located (Bakka 1958b).

The ship has been the main focus of most typologies (Fett and Fett 1941; Malmer 1981; Mandt 1972, 1991; Marstrander 1963; Kaul 1998, 2004; Ling 2008; Sognnes 1987) as it is the dominating motif and is found more or less all over Scandinavia. Some ship types appear to be similar and are found in most regions. Chronological typologies are created by comparing with images on bronzes as well as images in closed contexts i.e. burials. As many sites do not have ship images, using a chronology of rock art based on ship images is problematic. However, it has been an accepted practice, as the ship images do not remain static throughout the Bronze Age but change stylistically. In addition, ships are often used as decoration on bronze objects that have been found in datable contexts, or that can be dated typologically. Other motifs can be more difficult to date as they appear throughout the Bronze Age, such as the ring motif in all its variations, or the cup mark.

There is a risk in comparing ships in West Norway to ship images from different regions of Scandinavia and images on bronze objects: the images might not be contemporary, and different media can have different meanings or usage – bronze artefacts can be recycled and transformed into new artefacts in contrast to panels on outcrops and boulders. There is also the risk of circular arguments. Images on bronze and on rock have been discussed by Jarl Nordbladh, who argued that they could represent two different forms of symbolic systems that had their own symbolism and meaning in such a way that they cannot be compared directly (1980:27). This is a valid point; however, I believe that images on bronzes are important chronological markers – the similarities are so great that there can be little reason to doubt that images on bronze and in rock are contemporary. The images on bronzes are more detailed than their counterparts in stone, and this is clearly related to the medium of bronze, a comparatively easier medium to work with. As long as there are no other available methods for direct or absolute dating of rock art, comparison with bronzes combined with shoreline displacement curves is a good way of establishing a reliable chronology. However, in terms of meaning it should be remembered that the decorated razors were personal items that were eventually deposited in burials and hidden, while images in rock were stationary and in principle public, and unless they were made on slabs that could be included in a burial (Goldhahn 1999; Syvertsen 2002, 2003, 2005), they were not hidden from view. The razors and other decorated bronze items were presumably used by a social elite, while rock art in

principle could have been available for all to see. So, even though the images are similar or identical, they could have been used differently, in different social spheres and contexts.

The images in Scandinavia have many similarities as well as differences. This indicates a general, pan-Scandinavian sphere of rock art production, where there is a set of motifs that is always used: the ship, various types of rings, cup marks, and footprints. In addition, there are regional or local variations, the basic motifs are embellished or changed, other motifs are added. We should certainly be cautious when we compare images from other parts of Scandinavia, however, the main corpus of images appears all over Scandinavia and displays similarities, and for that reason I have taken recent results from Bohuslän (Ling 2008) into account. It would appear that it is easier for us to acknowledge that a bronze item could have travelled long-distance with the people who carried it, but we do not accept the same for images in rock. These images could have had counterparts not only on bronze but on objects made from perishable materials. People did travel in the Bronze Age, and rock art images do indicate contacts between large areas. With these factors in mind, I have compared images in Hardanger and Sunnhordland to images on Southern Scandinavian bronze objects as well as images from Southern Scandinavian rock art sites. Again, I want to reiterate that similar images do not equal similar meaning. The combination of motifs, elaboration, and number of motifs, are different in Southern Sweden compared to West Norway, but they are nevertheless likely to be contemporary.

5.2. Ship typology and chronology

The typological-chronological characteristics that are usually focused on in typologies are the shape of the stems, keel line extensions, crew strokes (e.g. Fett and Fett 1941; Glob 1969; Johnsen 1974; Sognnes 1987; Mandt 1991; Kaul 1998; Ling 2008), some also focus on secondary elements such as animal heads, lurs and so on (e.g. Marstrander 1963). Marstrander differentiated between the “simple” and the “rich” style, where the more elaborate ships were dated to period 5-6 (1963:76-77). There is a general agreement that elaborate ships are a Late Bronze Age characteristic (cf. Marstrander 1963; Mandt 1991; Kaul 1998). However, how certain elements are emphasised can be subjective, and the degree of elaboration can be judged differently by different researchers.

Mandt's typology is based mainly on the shape and curvature of the stems and keel line extensions, and the shape of the hull has some significance (1991:47, figure 3.15; figure 34 this chapter). There are three main types, the A, B, and C-type, which correspond to ships with keel and gunwale, ships with a keel line only, and contoured ships. The second major distinction is the prows: type 1 prows are angled or straight, type 2 prows are strongly curved inwards, type 3 prows are slightly curved, while type 4 does not have a marked transition between keel and keel line extensions and between gunwale and stems.










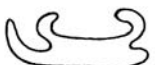

		1	2		3	4
		ANGLED STEMS	CURVED STEMS		CURVED STEMS	NO MARKED TRANSITION
			LOW STEMS	HIGH STEMS		
A	DOUBLE-LINED SHIP					
B	SINGLE-LINED SHIP					
C	CONTOURED SHIP					

Figure 34 Mandt's classification system, reworked after Mandt 1991:47, figure 3.15.

The most recent attempt to create a chronology of ship images was presented by Flemming Kaul (1998). He has put together a chronological typology of ship images on Danish bronze razors and compared them to ship images carved in stone, thus dating the rock art as well. It should be pointed out that this chronology concerns images of ships, other types of figurative images are not dated, other than as secondary elements associated with ships. Kaul emphasises the shape of the prows in his typology (1998:87). Early ships have stems that curve inwards, these can be either high or low, and sometimes end in a dot. From period 4 the stems curve outwards (Kaul 1998). The typology hinges on the date of the Rørby-ship to period 1 (Lomborg 1959) and on the assumption that the ship image was part of the sword's original decoration. The ship image on the Rørby sword is considered by Kaul as the earliest ship image in Southern Scandinavia, and is seen as proof that the typical Nordic rock carving

ship was fully developed at the beginning of the Bronze Age (Kaul 1998:73). This is debatable in view of the northern rock art tradition in large parts of Scandinavia where ships were depicted; however, in terms of images on bronzes, this is correct. Kaul does not consider the ships of the northern tradition (1998:90).

The ships of the northern tradition are square ships, Mandt's type A1/B1 (Mandt 1991, Sognnes 1987). Ships of the northern tradition are found in central Norway, along the west Norwegian coast and down to southernmost Norway. In west Norway, its distribution is limited to coastal areas, that is, the outer coast and near the shipping lane. The sites are found in a variety of locations, some on islands, some on the mainland, but all are found near the sea. These ships differ from "regular" ships in that the hull is square and the stems are vertical or at a slight angle. They are found at five sites in Sogn and Fjordane county, the Mjeltehaugen barrow in Sunnmøre, Møre and Romsdal county, and finally at least six sites in Hordaland county, four of which are found in Hardanger (Vangdal 1, Linga, Berge) and one site in Sunnhordland (Utbjoa 4). The technique is pecking, but at Krabbestig, Sogn and Fjordane, some of the lines were polished (Wrigglesworth 2003). Two A1 ships at Haustveit are interpreted as geometric motifs by Gro Mandt although she has noted that they look like A1 ships (Mandt Larsen 1972:43 and Pl 52b), and there is an angled figure at Hammarhaug that could be interpreted as a B1 ship (Mandt Larsen 1972: Pl 21a, fig 28).

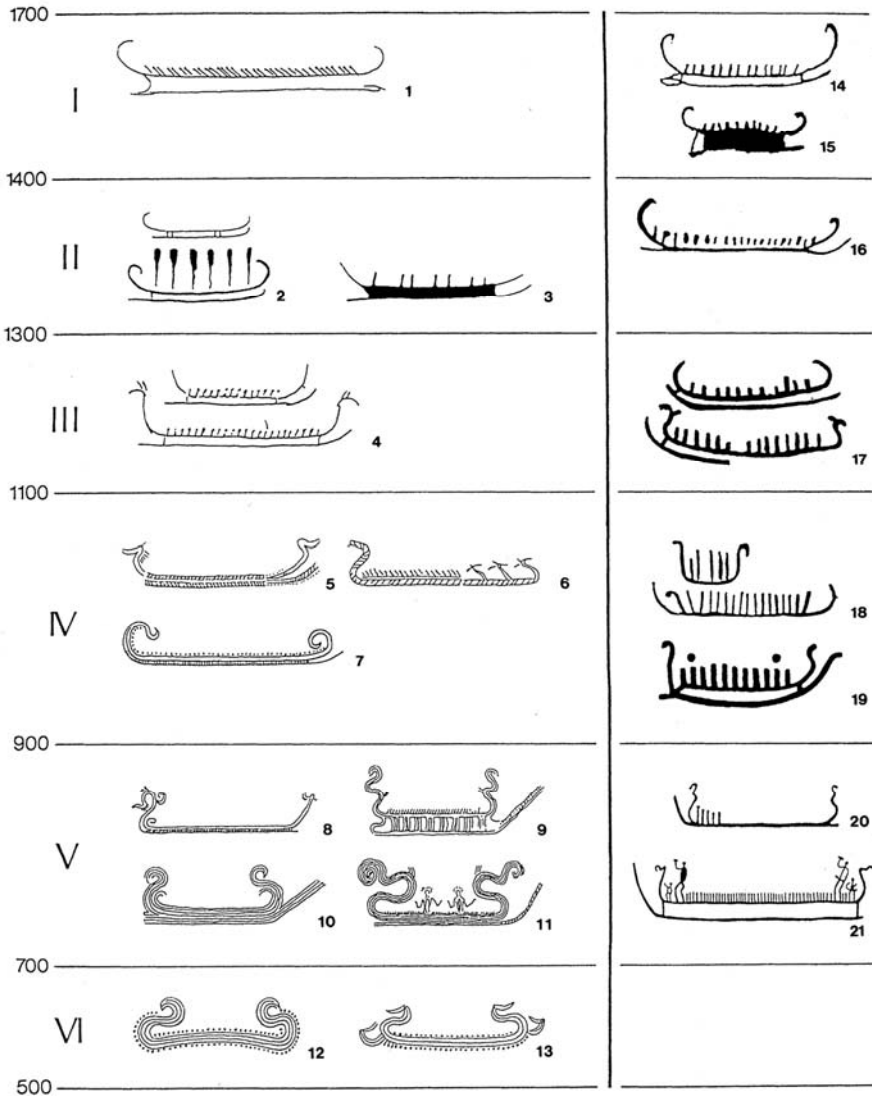


Figure 35 Kaul's chronology of ship images. After Kaul 1998:88.

A recent study by Johan Ling (2008) has shown that the comparative method, i.e. comparison with images on bronzes, is relatively accurate for the rock art in Bohuslän, Sweden. Ling has compared Kaul's chronology with shore line data and thus been able to refine this chronology (2008:105). By measuring each ship in relation to the sea level, he has shown how ships were added to panels as the sea level gradually changed. As the shore line data for the study area in the Bronze Age is not detailed enough, I have not been able to carry out a study similar to

Ling's. The analysis indicated that the shape of the stems and keel line extensions are chronological characteristics (*ibid*). As a general guideline for Southern Scandinavian ship images, this chronology works quite well. Transferring Ling's results to West Norway directly is somewhat problematic as the shore line displacement is substantial in Bohuslän while it was less dramatic in West Norway, and as many types of ship are specific to this region, in particular the square A1/B1 ship. Ling's refined chronology is interesting, as it displays certain characteristics that can be found in West Norway, such as the shape of the prows and keel extensions. This chronology is useful for comparison, but should be used with some caution, as noted in section 5.1 above.

Most ship images in Hardanger and Sunnhordland cannot be directly compared to images on bronzes or in other parts of Southern Scandinavia, and for this reason I have used Gro Mandt's chronological typology in combination with Kaul's chronology, and I have also included Ling's revised chronology. Mandt's system represents a wide temporal range, as will become apparent in the next section, but this reflects the uncertainties in terms of secure dates. However, it includes ship types that only occur in West Norway. Used in combination with Kaul's chronology and supplemented by Ling's findings in Bohuslän as well as chronologies and typologies developed by other researchers where applicable, Mandt's typology is a good tool for placing the ship images in the study area within a chronological framework.

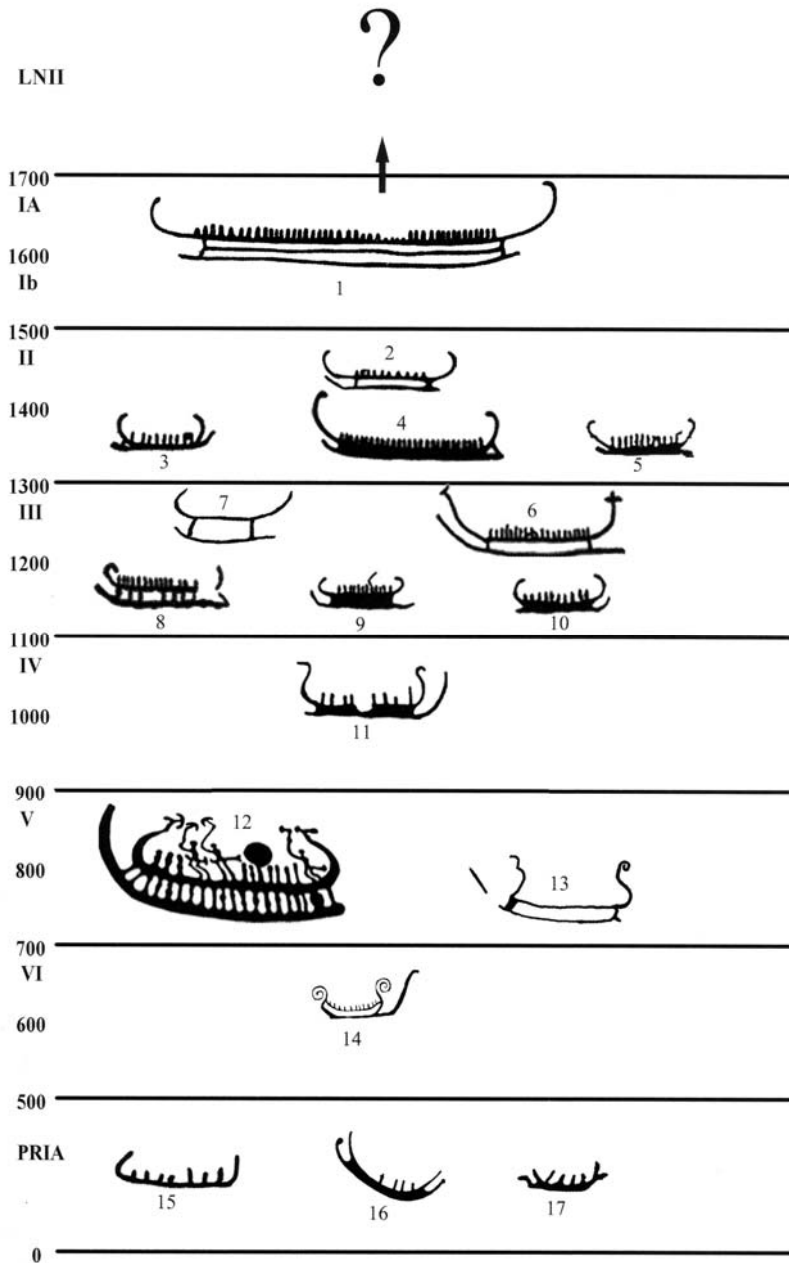


Figure 36 Ling's chronology of ship images in Bohuslän. After Ling 2008:105.

5.2.1. Ship chronology in Hardanger and Sunnhordland

I have used the following ship types and chronology in this study:

A1: Square hull, vertical stems or stems that are angled outwards. In some cases there are double prows and straight, horizontal keel extensions. The hull may be decorated with vertical lines (fig. 5.4). Crew strokes are rare. There is some regional variation.

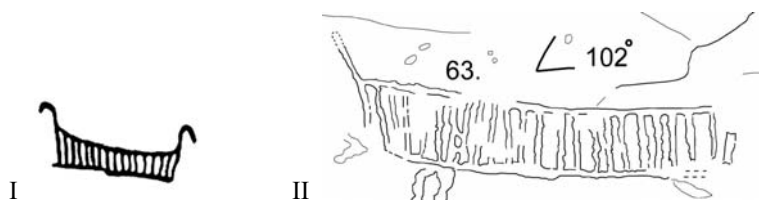


Figure 37 A1-type ships in the study area. I: Vangdal 1 (Mandt Larsen 1972: Pl 37, fig 7) and II: Linga, fig. 63, tracing by Jan Magne Gjerde and Trond Linge 2002. Not to scale.

Date: The date of this type of ship is debated, as it is similar to ships found on panels from the hunter-gatherer tradition, found at sites such as Nämforsen in Sweden (Hallström 1960), Alta in Northern Norway (Helskog 1984, 1988) and Hammer in Central Norway (Bakka and Gaustad 1975; Bakka 1988). It has been dated to the Early Bronze Age or Late Neolithic based on the ship images in the Mjeltehaugen barrow (de Lange 1912; Johnsen 1974; Mandt 1983, 1991; Linge 2007). The barrow has been dated to period 2-3, but this is not a secure date (Linge 2007). In addition, we do not know at which point in the “history” of this particular type that the images in Mjeltehaugen were made – these could have been relatively late images and their presence only tells us that in West Norway such ships were made in the Early Bronze Age; this is neither a *terminus ante* nor *post quem*. Similar ships on sites in Rogaland have been dated to the Late Neolithic (Johnsen 1974:166), while Lindqvist (1984) dated the ships at Leirvåg in Sogn and Fjordane county to the Middle or Late Neolithic. Malmer dated this type (his type EII and EIII) to the Late Bronze Age (1981:40). A similar type of ship is found at the Evenhus site in Central Norway, and according to Kalle Sognnes, recent shore line data indicates that the site was created sometime in the Late Neolithic up to period 2-3 of the Early Bronze Age, 2050-1300 cal BC (Sognnes 2002:6). This indicates only that ships of this type were made in the Early Bronze Age and could have been made in the Late Neolithic, but does not help narrowing down the date.

Some A1 ships have keel line extensions which occur from period 1 elsewhere in Southern Scandinavia (e.g. the Rørby ship), others have a slightly raised double prow which occurs from period 2. Some have a small angled stem extension which is more usual on Late Bronze Age ships, but can appear from period 3 and onwards. Some of these characteristics are found on Stone Age ships; at Alta ships often have stems ending in animal heads (Helskog 1988: 90-93) and in central Norway, the ships at Evenhus have prows that end in bird-like extensions (Gjessing 1936: Pl LXXIII).

There appears to be a stylistic link between the northern type of ships and the A1-type ships, and it is possible that the latter should be considered as a development of such ships. Sognnes suggests that these ships could be a link between the northern and southern tradition in central Norway (Sognnes 1990:65). However, in West Norway there are no ships on the Stone Age sites (except for one possible ship at Ausevik, Sogn and Fjordane county, cf. Walderhaug 1994), so that the A1 ship cannot be a direct development of ship images that already existed on a site. The A1 ships at Domba, Sogn and Fjordane county, are almost birdlike – and could perhaps be a link between the A1 ships found in West Norway and ships found on Stone Age sites in Central and Northern Norway. The A1 ships are likely to be a development of ships that were made in the Stone Age in Northern Norway and central Norway and as such they are a northern Scandinavian phenomenon. However, that does not imply that the ships in the study area can be dated to the Late Neolithic.

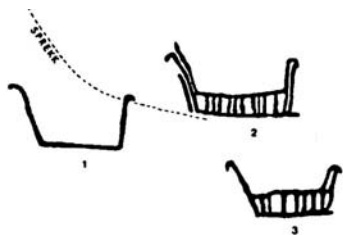


Figure 38 A1 and B1 ships at Domba, Sogn and Fjordane county. Reworked after Mandt 1991:564, fig 12.35.

Shore line displacement curves might contribute to a more secure date. Vangdal 1 is located about 10 m.a.s.l, and in this area the shore line was about 10 meters around 2000 BC and eight metres at 1000 BC. This means that the images here could potentially have been made towards the end of the Late Neolithic, if they were made at the water's edge. At Linga, the lowest figures are 10 m.a.s.l, which corresponds roughly to the beginning of the Bronze Age.

The highest figures are about 12 m.a.s.l. However, this does not absolutely confirm the date, as the curves for the Bronze Age are somewhat unreliable, as noted in chapter four.

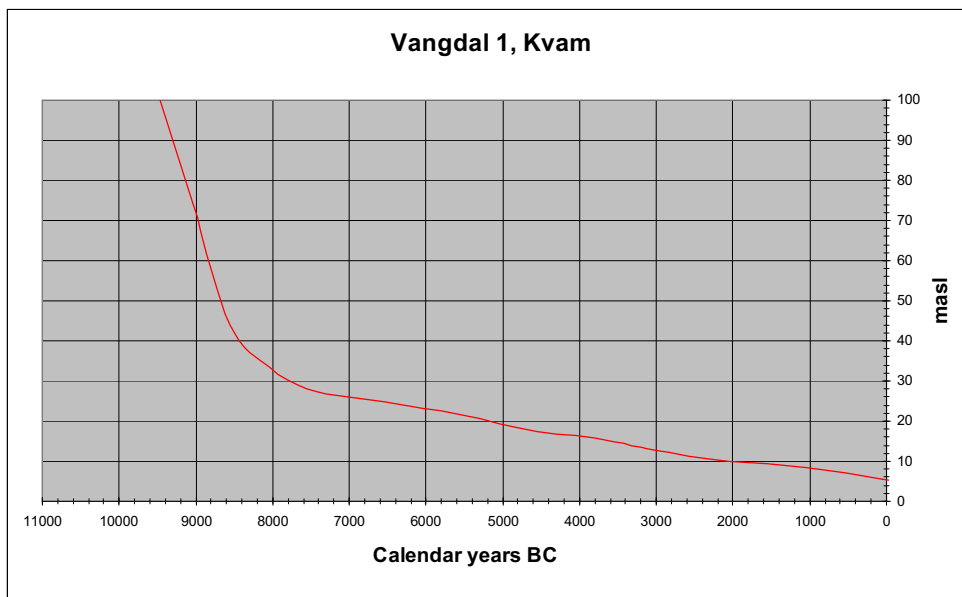
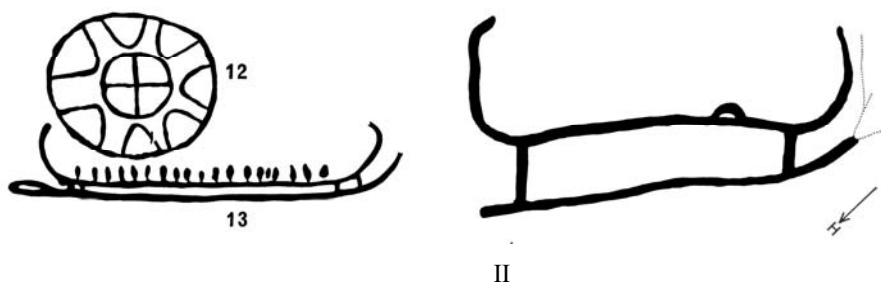


Figure 39 Shoreline diagram for Vangdal, based on Lohne 2006.

I will not rule out the possibility that some of these ships were made in the Late Neolithic, but the available evidence does suggest that the majority were made in the Early Bronze Age, period 1-3.

A2: Ship with keel and gunwale, the stems curve inwards, but may have ends that curve outwards. Double prows are the rule, and often a keel line extension that may be horizontal, looped or curve upwards (figure 40). The hull may be decorated with vertical or slanted lines, sometimes forming triangles. The stems may end in animal heads, and crew strokes are usual, including lurs and lurblowers. Mandt distinguishes between A2a and A2b ships, where the former have low stems and the latter have high stems. There is a great deal of variation within this group, which covers ship types from the Kivik burial, the Rørby sword and the Wismar horn. The Kivik cairn in the south of Sweden is a huge cairn that contained a cist with decorated slabs. Inside, there were cremated and unburned bones and the remains of several bronze objects: a fragmentary fibula, a fragmentary sword pommel, and thin fragments that have been interpreted as the remains of a bowl, dating the cist to the Early Bronze Age

(Randsborg 1993). There were also bones around the cist. Recent radiocarbon dates and osteological analyses have indicated that the bones come from several individuals from the Early Bronze Age (Goldhahn 2005:250). The Rørby sword is a scimitar, found in a field in Denmark. It is decorated with a line pattern, and a small ship, the Rørby ship (Kaul 1998). The Wismar horn actually consists of three decorated bronze fittings for a horn, found in a bog in Mecklenburg in 1836. The fittings are decorated with geometric designs, ships, and anthropomorphic figures (Marstrander 1963; Randsborg 1993:99).



I

II

Figure 40 A2-type ships in the study area. I: Haustveit B (Mandt Larsen 1972: Pl 52a), II: Fjøsna 3 (Mandt Larsen 1972: Pl 8a). Not to scale.

Date: As the type comprises references to a number of ships on bronzes with varying dates, the type ranges from period 1 to the beginning of period 4 (Mandt 1991) based on three chronological markers, the Rørby sword, the Kivik cairn and the Wismar horn. The Rørby sword is dated to period 1 based on its decoration consisting of line patterns. This is a long and sleek ship, with raised and inward curving stems and a looped keel line extension (Kaul 1998). The decorated slabs in the Kivik cairn included images of ships with stems that curve inwards (Randsborg 1993). The Wismar horn is decorated with a variety of motifs, including ships, which are double-lined and have crew strokes, keel line extensions, double prows where the lower stem curves upwards. The upper stems curve upwards and slightly outwards, and some end in animal heads complete with “ears”. It has been dated to period 3 (e.g. Glob 1969; Mandt 1991; Kaul 1998) or period 4 (Marstrander 1963). A more detailed chronology based on the shape of the prows is possible to a certain degree, as has been demonstrated by Ling (2008) and Kaul (1998). Both high and low stems appear in the Early Bronze Age, so this is not an element that seems to have any impact on the date. Rather, it seems that the curve of the stems is more useful for dating. Stems ending in animal heads are usually attributed to the Late Bronze Age (Marstrander 1963; Mandt 1991), and the stems curve outwards from period 4. Based on the Wismar horn and Ling’s measurements in Bohuslän, it would seem that stems ending in animal heads are a feature that begins in period 3. Another

feature that is usually attributed to the Late Bronze Age is the presence of lurs (figure 41). However, Ling has shown that lurs may be found on ships dated to period 3. In West Norway, lurs seem to be a later feature (Mandt 1991; Vevatne 1996). A2 ships with inwards curving prows and keel line extensions are thus dated to the Early Bronze Age, period 1-3 while ships with outward curving stems, lurs, animal heads, or other elaboration are dated to period 3-5. In West Norway, the ship type appears to cluster in periods 3 and 4.



Figure 41 A2a ship with lurs, Bakke 1 (Mandt Larsen 1972: Pl 32a).

A3: Ship with keel and gunwale, the stems curve upward and may end in a V-shape or in cup marks, the prows are double at both ends (figure 42). The ship is symmetrical, and this type is similar to the Nydam ship found in a Danish bog and dated to around 400 AD (Mandt 1991:325).

Date: Ships of this type have been found on the Kårstad panel from Sogn and Fjordane, where they were superposed by runes that can be dated to around 500 AD (Mandt 1991, 2005). Thus it cannot be later than 500 AD, and is dated to around 400-500 AD.

A4: This ship is symmetrical, it has a keel and gunwale, with no marked transition between the keel and stems, and has a double prow at both ends. There may be crew strokes, but this varies.

Date: The type is often referred to as Hjortspring type as it is similar to the Hjortspring ship, found in a Danish bog and dated to around 300 BC (Randsborg 1995). However, it should be noted that the ship was reconstructed by referring to rock art images (Mandt 1991). In Central Norway, ships of this type are dated to the Pre-Roman Iron Age (Sognnes 1993:163). Ling also dates such ships in Bohuslän to the Pre-Roman Iron Age (Ling 2008). It is also found on the Kårstad panel, superposed by the later A3 type ship (Mandt 1991, 2005). It is therefore likely that A4 ships should be dated to the Pre-Roman Iron Age.

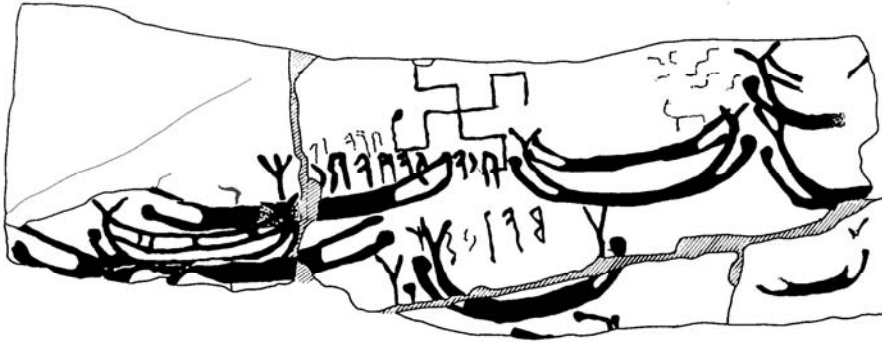


Figure 42 The Kårstad panel, with A3 ships and A4 ships. The A3 ships have V-shaped stem extensions, the lower stems end in dots. After Mandt 1991: 573, fig. 12.41.

B1: Ship with keel and no gunwale, stems are straight or at an angle; the type is otherwise identical to A1 ships. Crew strokes are found in some cases (figure 43).



Figure 43 B1 ships, Utbjoa 4 (Mandt Larsen 1972: Pl 29a).

Date: The type is a variation of A1 type, and I would thus date it to Early Bronze Age period 1 – 3 (cf. Mandt 1991:298). This is in part confirmed by shore line displacement curves. At Berge, the panel is about 7 m.a.s.l. According to the curves for this area, this was the sea level at around 1000 BC, whereas it was 10 m around 2000 BC. As the B1 ship is located about 4 metres above the present ground, i.e. at 11 m.a.s.l., a date to the end of the Late Neolithic is possible, but the shore line curve indicates at least that the image is likely to have been made in the Early Bronze Age.

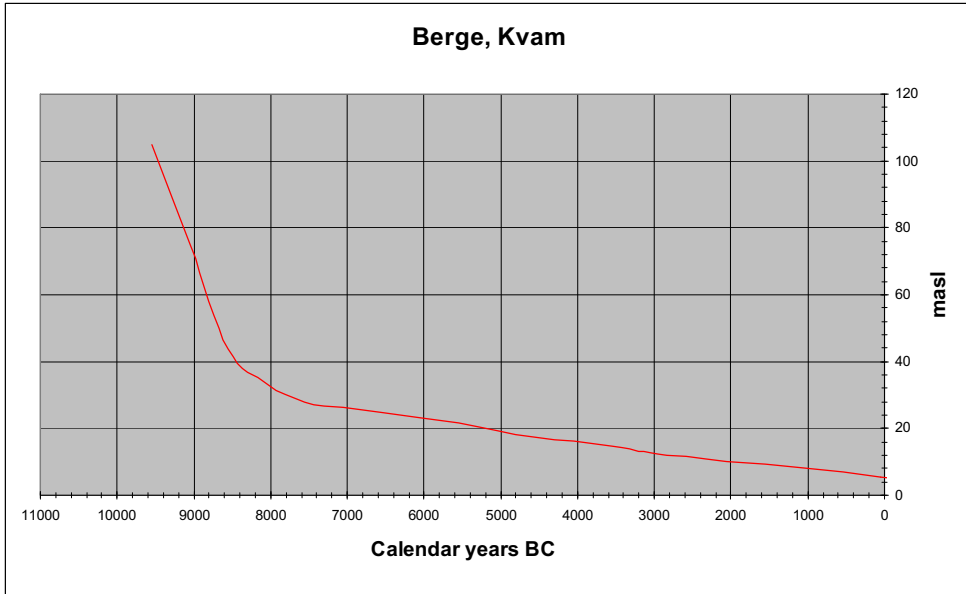


Figure 44 Shoreline diagram for Berge, based on Lohne 2006.

B2: Ship with keel and stems curved inwards. There are crew strokes in some cases, sometimes a double prow at one end and a keel extension which can be flat or upturned. The stems may end in animal heads.



Figure 45 B2 ships. I: Fjøsna 2, figure 2 (Mandt Larsen 1972: Pl 6b), II: Bakke 1, figure 28 (Mandt Larsen 1972: Pl 30). Not to scale.

Date: Mandt places the type in period 3 to 5, alongside A2 and C2 type ships (1991:298). Kaul places some such ships in period 2 (1998), and Ling places them in period 2 and 3 (2008). Based on comparisons with the bronzes and Swedish sites, I would place the type as early as period 2 and mainly period 3-4, although a later date to period 5 cannot be ruled out for some ships.

B3: Ship with keel and curved stems, more open than B2 ships. Double prows at one end, keel line extensions, and crew strokes occur.

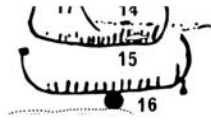


Figure 46 B3 ships at Hammarhaug (Mandt Larsen 1972: Pl 20).

Date: Like the B2 type, this has been given a wide date by Mandt, to period 3 to 5 (1991:336). The stems are less curved than the B2 ships and this is a feature that can be seen on bronzes from period 3, 4, and 5 (Kaul 1998:88). I would therefore place the type no earlier than period 3 and no later than period 5.

B4: Single-lined, slightly curved and symmetrical line with no marked transition between the keel and stem. Crew strokes may occur.



Figure 47 B4 ship, Børve 1 (Mandt Larsen 1972: Pl 45a).

Date: As these ships are hardly more than slightly curved single lines, they are difficult to identify and date. However, they do appear to be rather symmetrical, which is a later characteristic and I would place them in period 6 or the Pre-Roman Iron Age.

C2: Contoured ship with stems that curve slightly inwards, and an upturned keel line extension that forms a double prow. A second small keel extension is common. Crew strokes occur.

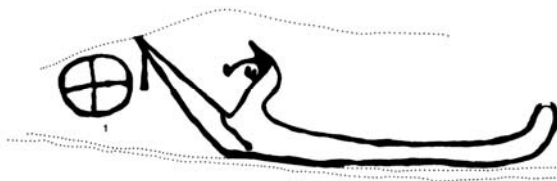


Figure 48 C2 ship, Utbjoa 2 (Mandt Larsen 1972: Pl 26b).

Date: Ships of this type are found on bronze razors and can be dated to period 4-6, and based on the bronzes the ships can be more specifically dated to period 5 (Marstrander 1963; Glob 1969; Kaul 1998:88; Mandt 1991:278-80).

C3: Contoured banana-shaped symmetrical ship. The stems may end in V-shapes, and there may be some decoration of the hull in the form of horizontal or vertical lines.



Figure 49 C3 ships. I: Utbjoa 2 (Mandt Larsen 1972: Pl 26b), II: Bakke 1 (Mandt Larsen 1972: Pl 30). Not to scale.

Date: A ship of this type is found on a slab at Austrheim in Sogn and Fjordane county, placed on top of a barrow dated to around 400 AD (Mandt 1991). In Central Norway, ships of this type are generally dated to the Early Iron Age (Sognnes 1993), and as there are some variations within the type, there could also be a wider temporal range. Hence I have given this type a general date to the Early Iron Age, 500 BC-400 AD.

Ship type	Date
A1	Period 1-3
A2	Period 1- 4
A3	Early Iron Age
A4	Pre-Roman Iron Age
B1	Period 1-3
B2	Period 2-4/5
B3	Period 3-5
B4	Period 6 - Early Iron Age
C2	Period 4 – 6
C3	Early Iron Age

Figure 50 Ship types and chronology based on Mandt 1991.

Can this typology and chronology be used to determine when sites were created, and find a temporal sequence for ship-dominated sites in the study area? A handful of sites have A1 and/or B1 ships:

Berge	B1 ship, two possible B1 ships
Fjøsna 2	B1 ship
Flote 1	possible B1 ships
Hammarhaug	possible B1 ship
Hautveit	A1 ships
Linga	A1 and B1 ships
Utbjoa 4	B1 ships
Vangdal 1	A1 and B1 ships

Figure 51 Sites with A1 and B1 type ships, in alphabetical order.

The sites listed in figure 51 are the earliest ship-dominated sites in the study area. It cannot be ruled out that some of them could have been established in the Late Neolithic, as I have not found any indications that the A1/B1 ships could not have been made that early. Thus these are among the earliest sites in the study area, but which is the earliest is impossible to determine. As Vangdal also has images dated to the Late Mesolithic and Early Neolithic (Haugen 2007) on the panel Vangdal 2, it is possible that panel 1 could have been the first Bronze Age panel with ship images in the Hardangerfjord area – assuming that the earlier images contributed to the decision to make new images at panel 1. Shore line displacement curves for the sites confirm that they could have been made in the Early Bronze Age. A temporal sequence can be established through a combination of A1/B1 ships, A2 ships and possibly B2 ships. In addition to the A1/B1 ships, there are other ships that can be dated to the Early Bronze Age. The type in question is the Rørby-type ship (Kaul 1998, 2004; Ling 2008). Similar ships are found on open-air sites in Sweden, Denmark and Norway. A very good example is the ship at Berget 4 in Eastern Norway (Østmo 1990), which is almost identical to the Rørby ship. Some details are slightly different, probably due to the different media of stone and bronze. One ship at Hautveit is a close parallel to the Rørby-ship (figure 35 above). It has a looped keel line extension, inward curving stems and a double prow, where the keel line is slightly curved. Two vertical lines connect the gunwale and the keel at either end of the hull. An interesting feature of the Rørby-type ship is that it often has double crew strokes except for the first and the last stroke, which are always single, and these single lines could represent the oarsman and captain (Kaul 1998). This also appears to apply to Hautveit. I have already dated A2 ships to period 1-4, and here we have an example of an image that can be dated to period 1-2. Another example is one of the ships at Ullshelleren rock shelter on the Hardangervidda plateau. The ship has a strong parallel in the ships in the Sagaholm barrow

(Goldhahn 1999:55, 64-66, 88, 91). It is of great interest that this particular image is found in a rock shelter in the mountains, at more than 800 m.a.s.l. Excavations revealed flint in the bottom layer, used as strike-a-lights, of a type that is found in the Late Neolithic and Early Bronze Age (Odner 1969:20-21), and also known from the Late Bronze Age. Pollen analyses indicated the presence of grain and grazing indicators in the Late Bronze Age, a radiocarbon sample gave 1030±95 BC⁶ (Odner 1969:34). The excavated site at Ullshelleren is located about 30 metres from the rock art panel and is not directly connected. However, the archaeological material is at least partially contemporary with the rock art. Apart from the indications of Bronze Age activity, the excavation revealed layers dated to the Iron Age. Some of these could also be contemporary with the rock art, for instance the foot prints, which are relatively late, foot prints can in general be dated to the Late Bronze Age and the Early Iron Age in some cases (Vevatne 1996; Ling 2008; cf. section 5.4 below).



Figure 52 I: Ship from Ullshelleren (Mandt Larsen 1972: Pl 43) and II: close parallel from the Sagaholm barrow, slab no 34 (after Goldhahn 1999:66). Not to scale.

⁶ Uncalibrated date is not available.

Site	Date	Dating factors
Bakke 1	Period 3 - EIA	One A2a ship from period 3, several B2 and B3 ships, contoured ships (C3), at least one A4 ship. One possible B1 ship.
Bakke 2	Period 3-4	A2 ship. Slightly upturned keel extensions, inwards curving stems, and lurs. Probably no earlier than period 3 and no later than period 4.
Bakke 3	Period 2/3-4	A2 ships and one B3 ship. One A2 ship has long and upturned stems as well as keel extensions in the aft and fore. Similar ships are period 2-3 in Bohuslän (Ling 2008). One newly discovered ship has inwards curving stems, period 3 or 4. One ship cannot be given a secure date, it has a possible human figure incorporated in the stem and is fragmented.
Bakke 6	Period 3	A2 ship with inward curving stems. Fragmented. Possible animal head at one stem, but could also be random pecking marks
Berge	Period 1-EIA	B1 ships, one fragmented A2 ship with inwards curving stems, slight keel extension and lurs that could be period 3. Contoured ships, C2 and atypical C3, several A4 ships close to the ground, and symmetrical ships (A3 or variety of B4).
Børve 1	Period 6-EIA	Single-lined ship, symmetrical keel but has an angled stem at one end. Probably period 6 or Pre-Roman Iron Age
Fjøsna 1	Period 3-4	A2 ships. One ship (fig 6) has a large looped keel extension. Fig 5 has a prow ending in a dot, possibly an animal head.
Fjøsna 2	Period 1-4/5	One possible B1 ship, two A2 ships, B2 and B3 ships, one B2 ship has keel-line extension and slightly upturned lower front stem, parallels in Bohuslän are period 2-3 (Ling 2008).
Fjøsna 3	Period 3-4	A2 ship. Stems curve slightly inwards, upturned keel extensions; there is a small u-shaped attachment to the gunwale.
Flote 1	Period 3-6	A2 ships. Stems curve outwards and have possible animal heads, as well as lurs. Three ships could possibly be B1 types, with straight stems.
Fonnaland	Period 2/3 - 6	B2 ships. One ship has a curved stem and straight keel extension; parallels are dated to period 2 in Bohuslän (Ling 2008). The remaining two ships both have keel extensions and double stems; the lowest ship has a slightly inward curving stem. These two ships are given a general Bronze Age date.
Hammarhaug	Period 1-6, Pre-Roman Iron age	One possible B1 ship. Several B2 and B3 ships, four A2 ships, two have keel-line extensions. Mainly period 2/3-4, otherwise general Bronze Age date, possibly also Pre-Roman Iron Age.
Hautstveit	Period 1-4	A1 and A2 ships. One ship has an oval stabiliser; one

		ship has a horizontal keel-line extension as well as a looped stem.
Linga	Period 1-3	A1 and B1 ships; one A2 ship which has inwards curving stems and a small keel extension, and should be period 2-3. All figures are fragmented.
Ullshelleren	Period 2 (?)– 6, EIA.	One ship is a close parallel to ships in the Sagaholm barrow, double prow, keel extension, and angled stem in the aft. Two other ship depictions are too fragmented.
Utboja 1	Period 5-6, EIA	C2, C3 ships. Atypical C2 contoured ship with animal head and pointed prow. C3 ship with a slightly pointed stem. No parallels.
Utboja 2	Period 4-6	Possible ship, fragmented, with outward turned stem.
Utboja 3	Period 3-5	B3 ships, some possible A2 ships. General BA date, possibly clustering around period 3-4.
Utboja 4	Period 1-3	B1 ships, vertical stems. Possible animal heads.
Vangdal 1	Period 1-3	A1 ships, vertical and angled stems.
Vestbøstad	Period 4-6	A2, B3 ships with double prows. Elaborate stems with animal heads, some are S-shaped.
Vik 1	Period 6 - EIA	Atypical ship, symmetrical and has an oar at one end, and a spiral at the other end, but this could be secondary.

Figure 53 Panels with ships, their date, and basis for date in alphabetical order. Ships that are too fragmented for dating are not included.

My results are summarised in figure 53, where the sites are presented alphabetically. What the table shows is that the majority of sites have images or panels that can be dated to the Early Bronze Age, albeit somewhat tentatively in some cases. It also indicates that two sites were repeatedly used throughout the Bronze Age and into the Early Iron Age: Berge and Bakke 1. Berge has one B1 ship, two possible B1 ships, as well as an A2 ship and could have been established as early as period 1. A4 ships indicate use in the Pre-Roman Iron Age. Bakke 1 has one possible B1 ship, several B2 ships with inward curving stems and one A2 ship with a stabiliser and upturned keel extension in the prow, all indicating use in period 1 to 3, probably clustering around period 3. Both sites have contoured ships, which are a Late Bronze Age characteristic, and A4 ships. Three other panels at Bakke indicate an early date for this site, at Bakke 2 there is an A2 ship with inward curved stems, a slightly upturned keel extension and a double prow, as well as two lurs and two extended crew strokes that could perhaps also be interpreted as lurs. A likely date for this ship is period 3-4. A similar date should be given for the ship at Bakke 6, which is fragmented, but has inward curving stems. Cracks in the rock are incorporated into this particular ship. Four ships are known at Bakke 3; one ship has low upward curving stems and is similar to ships dated to period 2-3 in Bohuslän. There is also a

B3 ship as well as a recently discovered ship with inward curving stems, so a likely date for the establishment of this panel is period 3-4.

The analysis indicates that in the study area, the tradition of making ship images started at the beginning of the Bronze Age in the case of the A1 and B1 ships, while the majority of ships cluster around period 3 and 4.

5.3. Cup marks

Cup marks are especially problematic in terms of chronology, as they have been found in contexts that can be dated to the Neolithic through to the Middle Ages (Mandt 1991; Innselset 1995; Vevatne 1996). However, there seems to be some agreement that the majority can be dated to the Bronze and Iron Ages (Mandt 1991; Innselset 1995). The date to the Bronze Age is based on the presence of cup marks on panels with figurative images that can be dated, and the cup marks are thus dated to the Bronze Age by analogy, especially because they can appear to “interact” with the other images (e.g. cup marks between the legs of anthropomorphic images, cup marks integrated in ships). Cup marks have also been found in Bronze Age burials in Rogaland county, Southwest Norway (Fett and Fett 1941; Nordenborg Myhre 1998, 2004; Syvertsen 2003, 2005). However, cup marks are also found in megaliths in both Sweden and Denmark (Glob 1969). It can be difficult to establish whether the cup marks were made at the time of building the monuments or whether they were added later, as argued by Glob (1969).

The “pure” cup mark sites with no other images are harder to date. It is rather interesting that dating these sites implies a discussion of their location and use, whereas figurative rock art and any cup marks associated with figurative images are dated through analogy. A further implication is that cup marks risk being considered as a separate tradition. As mentioned in chapter four, they are often found in higher areas, in the mountains or on or near paths between the mountains and the farms, and thus they have been associated with summer farms. Bøe (1944) argued that the cup mark sites in Sogn and Fjordane county should be dated to the Bronze Age, in analogy with cup marks found on figurative panels in the lowland, and he related them to the use of the mountains for animal husbandry and pasture. Mandt tentatively dated these cup mark sites to the Early Iron Age in her Dr. Philos. thesis (1991:361-62), but has later acknowledged that some sites could be dated to the Late Neolithic/Early Bronze Age

and be related to early pastoralists (e.g. Mandt 2005:191-192). Cup marks are found among other archaeological remains in the mountains, and in Sogn and Fjordane county, where the location is similar to that in Hordaland, cup marks have been documented among houses and cooking pits with dates ranging from the Bronze Age to the Viking Age (Innselset 1995:73-74; Skrede 2002). In Hardanger, cup marks were found at Tokheimskaret, an area with rock shelters with Bronze Age dates as well as houses from the Viking period (Valvik 2000). Demonstrating a link between the cup marks and other archaeological remains is difficult, as cup marks are usually not found in direct association with houses, pits etc (but see Skrede 2002). Hence cup marks in the mountain areas could be dated to the Bronze Age as well as the Iron Age. On the other hand, in the case of Etne, Kjersti Vevatne has argued that the pure cup mark sites could be dated to the Late Neolithic and Early Bronze Age, based on location as well as analogies to sites in Britain (1996). Sonja Innselset also suggests that the cup marks in Valdres should be dated to the Neolithic-Early Bronze Age and places them within an early agro-pastoral tradition (1995:76-77).

I suggest that cup marks are mainly a Late Neolithic and Bronze Age phenomenon, with some use in the Iron Age. I find it doubtful that cup mark sites should be dated to the Iron Age purely because they are located in the mountains. They are not all found at or near summer farms (which tend to be historical or modern) – there are summer farms without cup mark sites so that there is no correlation between cup marks and summer farms. Innselset (1995) suggests that access to pasture was vital and that the apparent dominant location at summer farms is misleading as these places have had good pastures over time. I find this likely as the cup mark sites in both Hardanger and Etne are found in areas that would have been excellent for grazing. As discussed above in section 5.2.1, some ship images can be dated to the Pre-Roman Iron Age, some are most likely even later. However, these make up a small portion of the ship images in the study area, and the tradition of making ships and other images clearly halts to a stop in the course of the Iron Age. Thus I find it somewhat unlikely that the practice of making cup marks should not only continue, but take on almost explosive proportions in the Iron Age, while sites with figurative images and cup marks flourish in period 3. It is possible that some sites were established in the Iron Age, and cup marks could have been added to older sites. Nevertheless, I would argue that cup marks sites should be dated to the Late Neolithic and in particular the Bronze Age, and I will return to this discussion in section 5.7 on the chronology of geometric motifs below.

5.4. Anthropomorphic images

The human figures are concentrated to four sites: Flote 1, Bakke 1 and 3, Årsand, and Ullshelleren. Most figures are “stick people”, with few details, but one figure at Flote 1 is different as it is solidly carved (appendix D, PL 13). Flote 1 can be dated mainly to the Late Bronze Age based on the ship images although the presence of B1-type ships indicate some use in the Early Bronze Age, while the remaining panels have ships that can be dated from period 2/3 and onwards. At Bakke 1, the majority of anthropomorphic figures are not associated with ships, only a few are associated with a ship that can be dated to period 3-4. According to one study, the hieros-gamos motif can be dated to the Late Bronze Age (Fari 2006:307). As the humans at Flote 1 are mainly associated with ships that can be dated to the Late Bronze Age, it is likely that they can also be dated to the Late Bronze Age, period 4-6. In other parts of Norway and Scandinavia, similar dates have been proposed, as the majority of rock art is thought to have been made in period 4-6 (Marstrander 1963; Bertilsson 1987; Vevatne 1996).

Foot prints are classified as anthropomorphic images, and come in a variety of shapes and techniques, as indicated above. The main distinction is between contoured and solidly carved foot prints, and it is possible that this distinction is also chronological (Vevatne 1996). Solidly carved foot prints have been found in two burials in Rogaland County, at Myklebust and at Rege, both dated to the Early Bronze Age (Vevatne 1996; Syvertsen 2003:155, 157). The slab from the Myklebust barrow is said to have come from a small chamber, which would indicate a Late Bronze Age date (Syvertsen 2003:155). Glob argues that foot prints should be dated to the Early Bronze Age as many are found in datable burials (Glob 1969:95), although he does mention one image that is likely to be Late Bronze Age (*ibid*:96). The foot prints in Denmark are solidly carved. Burenhult dates these to period 3-4, while the contoured images are dated to period 4 (Burenhult 1980:120). It is plausible that the solidly carved images are somewhat earlier than the contoured foot prints, but as they only appear with cup marks in the study area, I find it hard to date these securely to the Early Bronze Age. Contoured foot prints are the most common type in the study area, and a date to the Late Bronze Age seems likely (Marstrander 1963; Mandt 1991; Vevatne 1996), but as some appear on panels that have ships

dated to both the Early and Late Bronze Age, e.g. Bakke 1, there is a possibility that some images could be earlier. Footprints are thus tentatively dated to period 3-6.

5.5. Zoomorphic images

The animal representations at Bakke 1, Flote 1 and Haustveit are generally interpreted as dogs and horses. There are no parallels to these images in other parts of Norway; the numerous animal depictions in Central Norway are interpreted as horses and are not direct parallels, however, some of those images can be dated to the Late Bronze Age or Early Iron Age based on shorelines (Sognnes 1987, 2001; Olsen 2007). The majority of animal representations are from Flote 1, which would date them to the Late Bronze Age (Vevatne 1996:69) based on the ship images, and it is probable that this can be extended to the images found at the sites in Hardanger as well, so that period 4-6 is a likely date.

5.6. Plant motifs

These motifs are rare in West Norway, and are thus harder to date confidently. As they only appear at Flote 1, it is likely that they should be given a date similar to the images of animals and humans (cf. Vevatne 1996). The plant motifs are dated to the Late Bronze Age, period 4-6.

5.7. Geometric motifs

Geometric motifs are also hard to date confidently, as they appear to have been made throughout the Bronze Age and Iron Age. Rings and concentric rings with or without a central cup mark seem to appear throughout the Bronze Age in Scandinavia. That is also the case with rings with four radials. Malmer argued that these motifs were among the earliest and dated them to the Early Bronze Age (Malmer 1981:72). This date is based on his argument that rock art diffused from Denmark, where such rings are numerous, and on his idea that rock art production was large at first, dropping throughout the remainder of the Bronze Age. As these rings are common in Southern Scandinavia, they must therefore be early. He also argued that the rings could represent wheels, and compared them to the Trundholm wagon (Malmer 1981:72) which is dated to period 2. The Trundholm wagon is not a wagon or chariot as such, rather, it is a large disc placed on a set of six wheels and connected to a figure of a horse,

which appears to draw the disc. A small loop indicates that this object could be attached to a string and pulled. Thus it has been interpreted as a ritual object, used in ceremonies or rituals. The disc is decorated with double spirals and concentric rings, and is covered with gold foil on one side. This has been interpreted as a representation of the sun (Kaul 1998, 2004). Thus, West Denmark is suggested as the origins of this particular “prototype” (Malmer 1981:70). Marstrander (1963) and Glob (1969) both argued that this motif should be dated mainly to the Early Bronze Age, based on their appearance on bronze objects and on stones and slabs in graves. Glob narrowed it down to period 3-4 (Glob 1969:73) in terms of secure dates from burials, but notes that the motif appears on bronze objects from period 1-3 as well as later ceramics (*ibid*:84). However, rings with four radials are found all over Scandinavia, in combination with different motifs such as ships, cup marks, anthropomorphic images and so on, and I find it likely that it appears throughout the Bronze Age.

Rings with more than four radials are rare in West Norway, and are concentrated to Støle in Etne (Mandt Larsen 1972; Vevatne 1996), where rings with five, six, seven and 11 radials are found. A dating indicator is a ring with five, possibly six, radials and a central cup mark that was found on a stone in the Nibehøj grave in Denmark, dated to the Late Neolithic (Glob 1969: 233-4). Cup marks were placed between the “spokes” (*ibid*: 77, fig. 73a, b). A bronze ring and a flint arrowhead were found in one of the three burials discovered. Rings with more than four radials are mainly a Danish phenomenon, but are also known in East Norway and Sweden (Marstrander 1963; Burenhult 1980), and one ring is found in Rogaland county (Fett and Fett 1941; Sør-Reime 1982). Vevatne dates them tentatively to the Late Neolithic based on the Danish dates (1996:77). The rings are rare, and sometimes appear in combination with other motifs such as rings with four radials (Glob 1969), ships, and anthropomorphic images (Burenhult 1980). I would extend the date to include the Early Bronze Age.

Spirals appear on a handful of sites in the study area, with a concentration at Flote 1. As is the case with the other ring motifs, spirals appear throughout the Bronze Age in terms of decoration on bronze artefacts. Connected spirals are known from period 2 (e.g. Montelius 1917: 56). Double spirals like the one at Flote 1 are found on period 5 fibulas (e.g. Montelius 1917:89; Marstrander 1963: 278-9). For this reason I would date the double spiral to period 5. The remaining spirals are given a wider date to the Bronze Age in general, although it is likely that they could be dated to the Late Bronze Age as the majority of images at Flote 1 and at Berge are dated to period 4-6. At Berge the spiral is set apart in a small area, not far from

the present ground, and it cannot be related to any other images. However, as the images in this section of the panel are later ships, I think it is probable that the spiral is contemporary and should be dated to period 4-6.

The complex rings are rare and contain a variety of elements. One of the rings at Haustveit, on panel B, is placed above a ship that I dated to the Early Bronze Age, period 1-2, in section 5.2. These two images are found on a small surface on the site, and give the impression of having been made at the same time. Four rings are located on panel A, and are associated with a ship that is dated to period 3-4. The ring at Flote 1 is not associated with any ship, and as indicated above, the earliest ship images here might have been made in period 2-3. A likely date for these rings is period 2-4. Two concentric rings at Bakke 1 have large semi-circular appendages, unique in the study area. Parallels are hard to find, so these rings have been given a general Bronze Age date.

Several researchers have argued that concentric rings in particular should be seen as an influence from the British Isles, where these motifs are known in megalithic art as well as on open air sites (e.g. Fett and Fett 1979; Burenhult 1980), thus giving them a very early date to the Neolithic. Concentric rings are found on bronze objects from the Early Bronze Age, e.g. on the period 2 axes from Fitjar and Ølen in Sunnhordland (cf. chapter four, six). Thus they appear throughout the Bronze Age. However, as mentioned above, there has been some discussion as to whether this motif originated in Irish and British megalithic art because of the great similarities. If that were the case, the motif could be dated to the Middle Neolithic (3400-2300 BC) (Vevatne 1996). Fett and Fett (1979) argued that the presence of U-shapes and handle-like appendages to rings indicate contact with Western Europe and megalithic art and dated them to the Late Neolithic (1979:90).

This issue is discussed by Kjersti Vevatne in her thesis on the rock art in Etne (1996). She finds that the greatest similarity between west Norwegian geometric rock art and megalithic art is the U-shape and concludes that megalithic art is not a clear parallel to the rock art in Etne (1996:83). On the other hand, she finds that there are clearer parallels to Irish and British open air rock art, especially the occurrence of single and concentric rings with central cup marks, grooves linking rings or cup marks, and the dominance of pure cup mark sites (ibid:90). These characteristics are also present in Etne and Hardanger. In addition, one concentric ring with a groove has been documented at Støle (ibid:90, fig 5.24II). The motifs

are related to the Beaker complex and the changes that took place with the introduction of an agro-pastoral economy at the transition to the Late Neolithic (Prescott 1991, 1993; Vevatne 1996: 92-95). On this basis Vevatne argues that making geometric motifs including cup marks in Etne started in the Late Neolithic, while concrete motifs such as ships were made in period 3-6 (1996:95). This is a difficult issue, as there are no clear indications of direct contact with Britain in the archaeological material. However, there is some evidence of British influence in Danish material, and a possible link is through contact with Denmark, especially through the importation of flint daggers. Why these motifs are concentrated to Etne and to some degree Hardanger, rather than Rogaland, is hard to explain. As argued in section 5.3 above, I think it is likely that cup marks were made as early as the Late Neolithic, and I agree with Kjersti Vevatne that rings with central cup marks could also have been made from the Late Neolithic onwards, within an agro-pastoral economic framework.

The rectangular or square geometric motifs are also difficult to date. They do not occur on decorated bronzes and must therefore be dated by analogy. In general, I have given these motifs a general date to the Bronze Age.

5.8. Summary

This chronological analysis indicates that the tradition of making ship images in the Bronze Age started in period 1-2, possibly in the Late Neolithic, and went on into the Pre-Roman Iron Age at some sites. The remaining motifs, plants, anthropomorphic and zoomorphic images, seem to have been mainly Late Bronze Age. Cup mark sites and sites dominated by rings with central cup marks are tentatively dated to the Late Neolithic and Bronze Age. There seems to be a peak in period 2-3 and another peak around period 4, certainly, the production of rock art does increase markedly in the Late Bronze Age. The analysis of ship types also indicated that some sites were clearly used throughout the Bronze and Iron Ages, in particular Bakke 1 and Berge. Flote 1 was also used throughout the Bronze Age. The overall number of images and stylistic variation at these panels indicate repeat visits and reuse. This also applies to Støle and Vinje 1; both sites have a large number of cup marks and geometric motifs and are likely to have been visited repeatedly. An important aspect is that this indicates the relationship to place – some sites were reused, while other sites that only contain a few images could have been the result of one single event.

As we have seen, pure cup mark sites as well as rings with central cup marks display similarities with Irish and British open rock art sites and rock art in burials (Bradley 1997), and could thus be tentatively dated to the Late Neolithic and the advent of a full agro-pastoral economy. These images could possibly be linked to Denmark; however, some ship types indicate contacts with Sweden in both the Early and Late Bronze Age. By comparing with ship images on bronzes and ship images in Bohuslän, I have been able to identify and date some images that are close parallels to specific types of ship in other areas of Scandinavia. There are only a few examples in the study area and thus there is not much on which to base any assumptions about how these images came into existence in West Norway. However, to my mind they do indicate interregional long distance contacts.

The chronology and typology of rock art in the study area clearly indicates that the area was not isolated, but had long-distance contacts with other parts of Scandinavia from the Late Neolithic and onwards. The similarities in terms of ships in particular, indicate a pan-Scandinavian conceptual common ground, where some basic ship designs are found everywhere, albeit with local variations. But, there were also local ship designs and other local characteristics in terms of choice of motifs (emphasis on specific images and combinations of motifs). This could suggest local traditions, and this will be explored further in chapter seven.

Chapter Six: Spatial and temporal patterns

This chapter focuses on the analysis of the archaeological material, the spatial dimension. First, a distribution analysis of rock art sites and graves will be conducted based on the three zones set out in chapter four. The aim is to pinpoint possible patterns in the material, which can give a more nuanced spatial understanding. I will focus on location in terms of landmarks, nodes, and lines of movement or communication (cf. chapter three). The aim here is to study and clarify the relationship between rock art, graves, and the landscape. The distribution of bronze and stone objects will be discussed in separate sections. This will, it is hoped, lead to a broader understanding of the spatial and temporal dimension of the archaeological record. I will start by considering the physical landscape, which is the framework for understanding the social and cultural use of landscape.

6.1. Topography

The topography in the study area is heterogeneous. In the Hardangerfjord area, it is dominated by high mountains, steep hillsides and the fjord itself, the water. There are several distinct topographical features that can be conceived as natural landmarks, and the fjord and its lesser fjords could also be landmarks in themselves. Today, most of the arable land is cleared and used for agriculture and fruit growing, with some wooded areas. The hillsides are usually forested and exploited for timber. As many farmers are scaling down their businesses and finding jobs elsewhere, the traditional cultural landscape, the result of centuries of traditional farming, is disappearing and is now overgrown by vegetation⁷. The landscape in Sunnhordland is similar to the Hardangerfjord, although as we move out of the fjord itself and get closer to the North Sea, the landscape breaks up into larger and smaller islands and peninsulas. The idea of seascape is particularly apt in zone 1 and 2, which are dominated by the sea and islands, in particular the area between the mouth of the Hardangerfjord and the North Sea, which is a large expanse of water. The islands are sparsely vegetated and dominated by outcrops and heaths, although there are low hills and mountains. This is indeed a seascape, dominated by water. In contrast, the Hardangerfjord might be characterised as a

⁷ For this reason, I have chosen to use photographs taken in the 1950s and 1960s to illustrate the topography in the study area. There was less vegetation at that time, because there were more animals that grazed and thus kept the vegetation in check. As more and more farmers give up, nature gradually reclaims fields and pastures.

“mountainscape”. The mountains carried the potential danger of avalanches and landslides, as evidenced by screes; in fact, one of the earliest Bronze Age figurative sites is found on a huge boulder that ended up in its location in an ancient landslide, the site Haustveit (chapter four and below, section 6.4.). Huge landslides were common in the time that followed the retraction of the ice sheet and ancient screes with giant boulders are thus commonplace in West Norway. Excavations at Aga revealed evidence of prehistoric landslides. This was found under a layer that indicated agricultural activity dated to the Late Neolithic and Early Bronze Age (Berge 2008). Even today, landslides are a serious problem in Hardanger, causing roads in dangerous areas to be closed when there is much rain. Historical sources inform of several catastrophic landslides that destroyed buildings and crops in Sør fjorden (Olafsen 1907; Bakke et al 2008). Precipitation and landslides would have been a problem in the Bronze Age as well, with a warmer and milder climate than today. Avalanches also occur in Sør fjorden, sometimes the snow does not stop until it reaches the shore (Bakke et al 2008).



Figure 54 The seascape of the study area. Map from Google Earth (©).

We can get an indication of what the Hardangerfjord area looked like in the Bronze Age by considering the physical properties of the present landscape, its main topographical forms, shore displacement data, and pollen data. From the few settlement sites that have been investigated, we know that agriculture was fully introduced by the Late Neolithic (Berge 2008). Pollen data indicate that there would have been forested areas with trees such as lime, hazel, oak, and pine (Hjelle et al 2006; Slinning 2007). A warmer climate would have provided excellent conditions for deciduous vegetation. The conditions for agriculture would have been excellent, with a mean temperature around 2-3 degrees above the present mean temperature. Mountain pastures would have been plentiful, especially as the glacier Folgefonna that covers much of the present Folgefonn peninsula was substantially reduced compared to today (Bakke and Nesje 2008: 95-96). Rivers and waterfalls were a source of occasional flooding as well as noise. Rivers pose a problem in terms of flooding, and flooding as a result of a combination of much rain and melting of ice is commonplace.



Figure 55 Granvin and the Granvinfjord, around 1890-1900. Hand coloured photo. http://www.flickr.com/photos/library_of_congress/3175015020/

There is no information to suggest in detail what the landscape looked like, particularly near the monuments. As most cairns are located in places on higher ground or on islands where they would have been visible, I think it is likely that visibility did matter to some degree. We can only assume that some locations did not have much vegetation, or at least did not have trees or forests, for instance cliffs or small islands where some burial cairns are located; provided that these particular monuments were meant to be seen by passersby. We can obviously never know the smells and sounds in the Bronze Age archaeologically. For that we need to use our subjective experience in a modern landscape, and thus it is easier to focus on vision. The majority of rock art sites in the lowland was located close to water or at the water's edge and it is unlikely that there would have been much vegetation in this zone. It is also possible that any vegetation was tended to and controlled. In the mountain area, cup mark sites could in principle have been relatively free of vegetation, as they were located in areas used for mountain pastures, where grazing animals would help keep the vegetation in check.

Recent archaeological excavations have shown that in some cases, forests were cleared high up on steep hillsides, houses were built, and fields were established in the clearings, as at Flatebø in Kvinnherad (Slinning 2007). This site is a good example of how the landscape was cleared and used from the Early Bronze Age onwards. The modern farm Flatebø is located in Nordrepollen, a small inlet from the fjord that follows the pattern in Hardanger: the mountains rise out of the sea, but now and again there is an inlet, or the mountains open up and there is a small valley of fertile land. Near the shore the land is relatively flat, rising up to the mountain. Here, 70 m.a.s.l., excavations uncovered postholes, a hearth and ard furrows, one of the postholes was dated to the Early Bronze Age (1390-970 cal BC) (*ibid*). There were also indications that fields were rotated: fields were laid fallow and used for grazing. Pollen analyses indicate a deciduous forest before clearing, consisting of elm (*Ulmus*), hazel (*Corylus*), lime (*Tilia*), and some oak (*Quercus*). Elm gradually diminishes, probably because the leaves were harvested as fodder. There are also grazing indicators as well as indicators of agriculture, including wheat pollen. The Early Bronze Age settlement was located high up on a steep slope. When considering that the place is found in a small fjord inlet surrounded by mountains and faces south, this makes sense as the sun would reach a location higher up in the landscape first and stay longer.

The weather is an inexhaustible source of interest and conversation among Norwegians. There are countless signs and proverbs that can be used for predicting the weather. This should

come as no surprise, because the weather is a very significant part of life in West Norway, as there is so much of it. Understanding weather conditions and knowledge about winds, tides, and currents are essential to survival for a coastal population. The inner fjords can become so cold that the water freezes in winter. Weather also has an influence on how the landscape is perceived and seen at all times, giving the impression of an ever changing and living landscape. This has consequences for the study of landscapes and what impressions one gets when visiting a site (cf. figure 56, 57). As the photos show, it is essential to visit a site more than once. Fog is a common occurrence in the Hardangerfjord area due to local meteorological circumstances (Skaar 2008).



Figure 56 Haustveit, Ullensvang on a rainy, misty November day in 2006. Photo: M. Wrigglesworth.



Figure 57 Haustveit, Ullensvang on a sunny day in May, 2007. Photo: M. Wigglesworth.

6.2. Zone 1: Bømlo, Fitjar, Stord, Sveio

This is a coastal zone, consisting mainly of islands. Bømlo, Fitjar and Stord are municipalities that are islands. The area is an archipelago that forms a barrier between the North Sea and the Hardangerfjord. Large areas consist of naked rock, with pockets of fertile land.

6.2.1. Rock art

There are few rock art sites in zone 1, and only one site is found on an outcrop, Vestbøstad. There are some stones or slabs with images (Førde and Røykjenes, Sveio municipality; Skålevik, Fitjar municipality), but these are found in secondary positions and are therefore not included in the analysis.



Figure 58 Rock art in zone 1, the coastal zone. 1:Skålevik, 2: Vestbøstad, 3: Førde, 4: Røykjenes.

Vestbøstad

The panel is located on a steep outcrop along small ridge, forming a clear edge and boundary in the landscape. The site overlooks a small lake. As the site has Late Bronze Age ships and is located at 24 m.a.s.l., it is clear that the site was never close to the shore. From the site the present infields as well as the outfields are seen, and the rock outcrop can be seen from a distance of up to approx. one kilometre (figure 59) - provided that one knows what one is looking for. There are cairns in the outfields at a distance of about 800 metres, but these are not visible from the site, as they blend into the rocky terrain. The lake is close to the panel, about 30-40 metres. Vestbøstad is defined as public and accessible, because it is visible from a large area. Today the ridge is covered with sediment and vegetation; no other images have been discovered on other exposed areas. In slanted sunlight, the images can be clearly seen 30-40 metres from the panel. The site is easily accessible and there would have been room for a large group in front of the panel. However, there are images on top of the outcrop as well, where the rock is horizontal and the images face the sky. These images are invisible to anyone standing in front of the panel; one has to climb up to the top of the outcrop in order to see

them. In this way, the location is accessible, but some of the images might not have been accessible to all visitors.



Figure 59 Vestbøstad 1 in the landscape. The arrow indicates the site. The lake is seen to the left. Photo: M. Wrigglesworth.

Landmarks: The hill behind the site has a flattish shape and is considered as a landmark here.

Nodes and communication: The site is not far from the sea and several cairns with Bronze Age dates are located at Kalveidet in the vicinity. There are several possible harbours and sheltered places to land boats in the area. The site is defined as a node. It is accessible and close to several possible lines of communication, by sea and over land. The nearest area that I would define as a local centre is central Fitjar, where there is one settlement site and several cairns and bronze objects from the Bronze Age.

6.2.2. Graves

As indicated in chapter 4, there are some securely dated graves in zone 1, in Fitjar and Sveio. Four cairns with finds dated to the Bronze Age are known in Fitjar: the cairn at Rimbareid, at Rossnes in Breivikjø, at Skålevik and Vestbøstad. Eyvind De Lange excavated several cairns in this area in the early 20th century, including the cairns mentioned – with the exception of

Rimbareid, which has not been professionally excavated. Some of the cairns he excavated could potentially be from the Bronze Age, but there were no finds, such as a cairn at Kalveid where a cist and small beach pebbles were found. This cairn could well have been built in the Bronze Age. There are a number of cairns at Skumsnes promontory, and several of these could be from the Bronze Age (Østerdal 1999). A long cairn at Glopfolmen island was excavated by De Lange, no finds were made, but the construction is similar to Late Bronze Age long cairns in Sweden, and Østerdal argues that it is likely to have been built in period 4-5 (1999:113). The Bronze Age cairns at Fitjar are located high up in the landscape, near the sea, with expansive views, but the view to the cairns is limited (Østerdal 1999:135-137). However, they are accessible and are located near sea routes.

At Stord there is a concentration of Bronze Age cairns at Hystad, as seen in chapter 4. The cairns at Valevåg bay in particular, were located close to the shore, and all the cairns were found along what would have been a small sound in the Bronze Age. These cairns are located at around 6 m.a.s.l. and up to around 10 m.a.s.l., and would have been visible to anyone passing through the sound, entering the Valevågen bay, or travelling close to land. In general the cairns are easily accessible from land.

In Sveio, two cairns have been excavated at Tjernagel, where the largest cairn contained two burial chambers and one collection of cremated bones dated to the Bronze Age, as described in chapter 4. There are other cairns located on promontories along the coast and along the Ålfjorden, with a good view of the fjord (Fett 1973c), and some of these could potentially have been built in the Bronze Age.

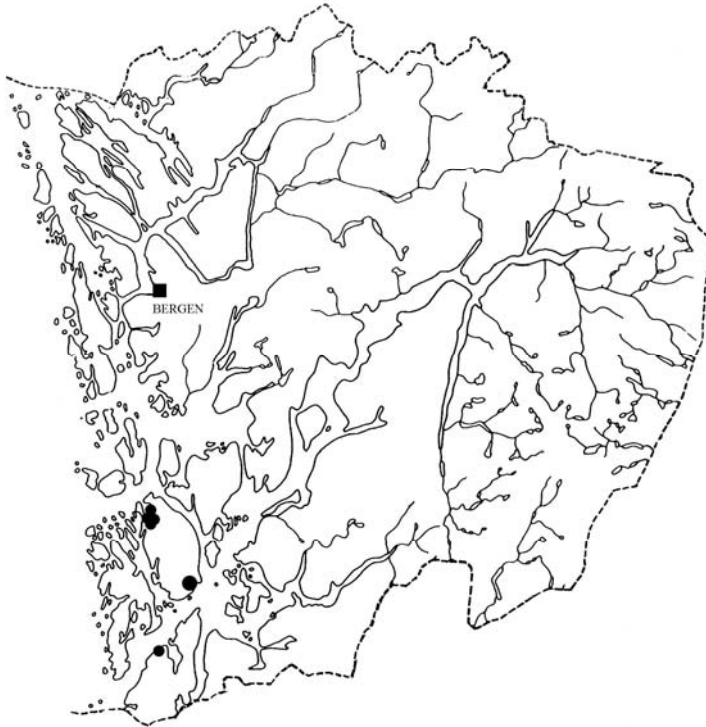


Figure 60 Graves in zone 1.

Landmarks: Some cairns are landmarks in themselves, such as Rimsvarden, which is found on top of a hill, dominating the surrounding area. The cairns at Vestbøstad and Skålavik were located near the Kalveidet isthmus which would have been a likely route for boats travelling in the area.

Nodes and communication: The cairns that have been excavated are all located near the shipping lane. Tjernagel is located on the coast and would have been passed by all northbound and southbound ships. The graves at Fitjar are oriented partly towards the islands and sounds between Fitjar and the surrounding small islands, routes that likely would have been used on a regular basis by anyone travelling along the coast here. Likewise, the cairns at Hystad are located on promontories on either side of bays or along what would have been a shallow sound.

Central Fitjar and the southern part of Stord are defined as local centres here.

6.2.3. Settlement sites

Settlement evidence from the Bronze Age is scarce in zone 1, where a multitude of Stone Age sites have been documented and excavated. However, some sites can be dated to the Bronze Age; in particular some of the sites excavated as part of a large excavation project in the 1990s in Bømlo, Stord and Sveio municipalities (Kristoffersen and Warren 2001). Five sites could be dated to the Late Neolithic and/or the Bronze Age, based on finds, mostly triangular and lanceolate retouched projectile points, and radiocarbon dates. The arrowheads do not necessarily date the sites in themselves as these points can be found in both Late Neolithic and Bronze Age contexts, and even Early Iron Age contexts (Kristoffersen and Warren 2001). One interesting site was excavated at Kobbvågen at Spissøy island in Bømlo municipality. The site is located 6-7 metres above the present shoreline, and a radiocarbon date of charcoal from a test pit gave 2530 ± 150 BP/ cal BC 820-405 (Beta-78706), i.e. Late Bronze Age-Early Iron Age. Another interesting site at Spissøy was a rock shelter with radiocarbon dates to the Late Neolithic and the Early Bronze Age: 3540 ± 50 BP/ cal BC 1900-1750 (Beta-72872) and 3130 ± 60 BP/cal BC 1500-1395 (Beta-95513) (Kristoffersen and Warren 2001). Four of the sites that have possible Bronze Age material or dates seem to have been locations that were not used for permanent settlement. How these sites should be interpreted is hard to say, they seem to represent episodes rather than permanent settlements. As they are located along the shipping lane, in bays and along sounds, it is tempting to see them in terms of movement along the coast – perhaps as places where travellers, hunters, or fishers spent the night. One site appears to have been more permanent, for instance a site at Nautøy island, where a posthole dated to the Late Bronze Age/Pre-Roman Iron Age was found, 2980 ± 100 BP/cal BC 755-375 (Beta-74482), as well as a cooking pit dated to the Middle Neolithic (Kristoffersen and Warren 2001:185).

At Fitjar several cooking pits were excavated in 1998. One pit was dated to the Early Bronze Age, 3020 ± 50 BP/cal BC 1400-1110 (Beta-110359) (Vevatne 1997) while two pits were dated to the Late Bronze Age, 2590 ± 90 BP/cal BC 795 (Beta-119798), 2580 ± 120 BP/cal BC 790 (Beta-119799) (Johannessen 1998). A flint arrowhead with concave base, debitage and two pieces of pottery were found. The area is well suited for cultivation and there is great potential for more Bronze Age settlement here.

6.3. Zone 2: Etne, Jondal, Kvinnherad, Kvam, Tysnes, Vindafjord (Ølen)

Topographically, this zone is somewhat varied as it encompasses the area from the islands to the first half of the Hardangerfjord. There are fertile valleys at Tysnes and good agricultural areas in Etne and along the Hardangerfjord, in particular in the Rosendal area in Kvinnherad, the area around Norheimsund in Kvam, and in Jondal. The fertile valleys run down from the mountains, and the Folgefonna glacier dominates the area.

6.3.1. Rock art

The sites in the lowland in zone 2 are mostly found in similar locations on or near the shore. In Ølen the sites are found in bays or close to water: Svolland 1-3 are located on a rock outcrop that faces a bay, while Utbjoa 4 and 5 are found in a bay. Hammarhaug in Kvinnherad is located in what would have been a wide bay in the Bronze Age, and further along the fjord, Berge is similarly located at the mouth of what would have been a bay or inlet in the Bronze Age. The figurative sites are otherwise located near water, with the exception of Bakke in Jondal and Årsand in Kvinnherad. Neither site has been shore bound as their location is higher than 30 m.a.s.l.

Compared to Hardanger, the location of the rock art in Etne differs somewhat: The sites are generally located on terraces in a valley stretching up from the fjord, overlooking the valley. None can be linked to the sea, but the majority of sites can be related to a lake that they overlook. The rock art sites are spread in three concentrations: Fjøsna 1-5, Fitja and Haugen are located around the fjord, Støle and Tesdal 1-2 are located up on the terraces, while the remaining sites are located around the northeastern end of the lake Storavatnet, and three sites, Skiftedalen 1-2, Vinja 1-3 and Volme, are located in the valley leading up from the lake. There is also a site on the Holsnanuten mountain. Several sites or panels on sites have not been found due to vegetation, some are found on slabs and stones that are in a secondary location with an unknown original position.

There are some stones or slabs with images (Myklestad and Ve, Tysnes; Nerheim, Vindafjord (Ølen); Halsnøy, Husa and Åkra, Kvinnherad; Sævarhagen 2, Jondal; Lunda 2, Etne), but these are found in secondary positions or have no context and are therefore not included in the analysis.

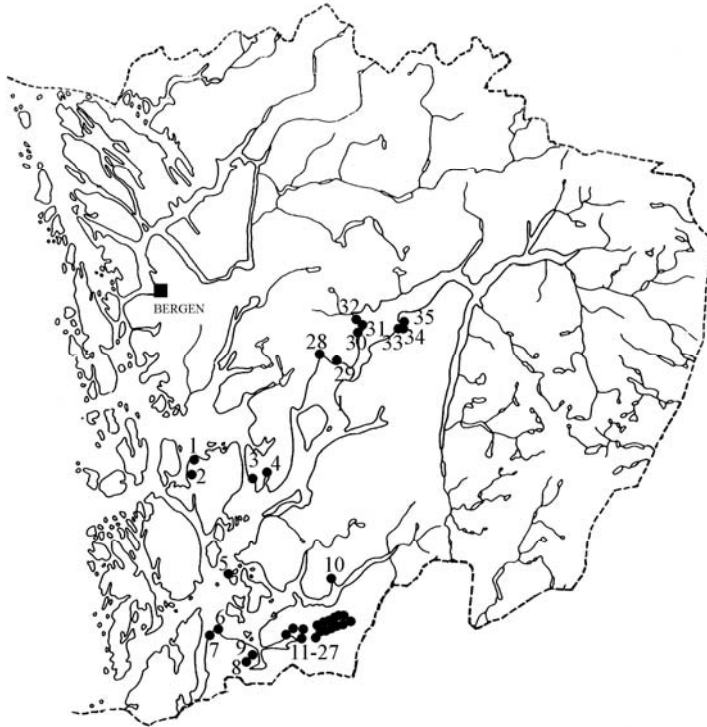


Figure 61 Rock art sites in zone 2. 1: Ve, 2: Myklestad, 3: Hammarhaug, 4: Huse, 5: Halsnøy, 6: Utbjoa, 7: Svolland, 8: Nerheim, 9: Lunde, 10: Åkra, 11-27: Etne, see figure 6.28, 28: Berge, 29: Linga, 30: Vangdal, 31: Fonnaland, 32: Vikøy, 33: Tveit, 34: Sævarhagen, 35: Bakke.

Bakke 1-6

Some lowland sites are not located in the shore zone, and this applies to Bakke. The site is found midway between a lake, Herandsvatnet, and the fjord, approximately 60 m.a.s.l. The panels are spread over two large outcrops, three panels are located on the largest outcrop. The outcrops are located on a slope, in a hilly landscape, and the view from the site is partially blocked in some directions, in particular to the south. To the west, the fjord is partially visible, obscured by modern houses and vegetation. Below panel 1, the largest panel, there is an edge created by a terrace. This means that it would have been next to impossible to actually see the site from below, or even from the sea. From a larger distance out to sea it would have been possible to see towards the place, but the outcrops would probably have been hard to discern. There is also the added problem of vegetation – if the site was surrounded by vegetation it would have been impossible to discern until one got close to the panels. A problem is that we do not know to what extent the landscape surrounding the site has been changed through

agriculture and dwelling – by filling in patches of land with rocks and soil to drain and make small fields, for instance. The conditions for agriculture are good in Herand, and we should expect there to have been several farms in this area. Thus Bakke could have been located in a built area, where there were houses and fields. We do not know how close to the settlements the rock art was located if there were settlements here. Recent excavations in several rock shelters in Jondal revealed layers dated to the Bronze Age in Sævarhelleren rock shelter (Bergsvik 2008), which is located about 200 metres as the crow flies to the north of Bakke (cf. section 6.3 below). According to information given to Jan Magne Gjerde (1998:34), when the area below the site was ploughed in the 1950s and 1960s, several round structures of coal containing stones were observed. Excavations here might indicate whether these structures were e.g. cooking pits and give more information as to the use of the site.



Figure 62 Bakke 1 in the centre of the photo, taken in 1967. View of Samlaneset and the fjord. Photo: Gro Mandt Larsen 1967, © Bergen Museum.

Landmarks: The nearest landmark is the mountain Samlanuten and the promontory Samlaneset, where several cairns are known, some of which are possibly Bronze Age.

Nodes and communication: Bakke is defined as a node here; it is located in an area that would have been well-suited to agriculture, close to the Samla mountain and the area is strategically placed along the fjord. The variety and chronology of motifs indicate a long period of use. The site is interpreted as an established meeting-place and a node in the Hardangerfjord area.



Figure 63 Bakke 1 in 2006. Photo: M. Wigglesworth.



Figure 64 Bakke 2, 3 and 6. Panel 3 is at the far right, panel 2 is behind the tree, and panel 6 is the cleared area of rock between the trees in the centre of the photo. Photo: M. Wrigglesworth.

Berge 1

The site is located at the foot of a hill, Fløyen, and there is a good view of the fjord from the site. One secure and two possible B1 type ships are recorded, about 4 metres above ground and set slightly apart from the other images. The remaining boats are mainly Late Bronze Age types; some may possibly be dated to the Early Iron Age. A small excavation in 1998 (Lødøen 2005) revealed marine sand and washed-out hearths directly in front of the panel. The charcoal was dated to the Pre-Roman Iron Age, indicating that in this period the water would still reach up to the panel at least on some occasions, and that there was a small beach in front of the panel where it was possible to make small fires. This is supported by the shoreline data; the foot of the panel is about 7 m.a.s.l (cf chapter five). The landscape surrounding the site is flat and there is a good view of the fjord today. The site is in fact located near a river delta and when this is taken into consideration together with the shore line displacement, the contemporary landscape would have been very different from the modern landscape. In the Bronze Age, Berge would have been located at the mouth of a wide bay or inlet from the fjord, in an open and visible location. The bay would have formed a good, natural harbour. From the site it is possible to see what would have been a headland marking the entrance to the bay, there is also a good view of the Hardangerfjord towards the island

Varaldsøy and the mountains beyond (figure 66). The view to the site would have been good from the bay and the fjord. The panel is vertical and would have appeared to rise out of the water, emphasised by the hill above it, thus having a dominant and monumental location in the landscape. The hill is visible from a great distance and is a dominant feature in the surrounding landscape. The site is easily accessible; however, based on the excavation results and shoreline data (Gjerde 1998, 2002; Lødøen 2005), it is likely that at times the site was only accessible by boat. The landscape context at Berge is considerably changed from the Bronze Age.

Landmarks: The hill Fløyen is considered as a landmark.

Nodes and communication: Berge is considered as a node, marking the entrance of a natural harbour. Situated in the widest part of the Hardangerfjord, it would have been strategically located, and the area could have functioned as a place for gathering larger groups of people.



Figure 65 Berge and Fløyen hill, the panel is located between the white house and the red house to the far left. Photo: M. Wrigglesworth.



Figure 66 The view from Berge towards the fjord. This was a shallow bay in the Bronze Age. Photo: M. Wrigglesworth.

Fjøsna 1-5

The site is located on four outcrops, now partially destroyed by the modern road, on a promontory. There is a good view of the fjord as well as central Etne, and the view to the site is good. It is possible to see the promontory from a long distance, but making out the outcrops is difficult. The site is easily accessible both from the sea and land. However, as the lowest image is 6.17 m.a.s.l and the shoreline was about five metres higher in the middle of the Bronze Age (Vevatne 1996:72), the sea would most likely have reached up to these images. It might have been difficult to see some of the images at the sites unless one was standing on the rock or perhaps viewing them from a boat, especially as the images are lightly pecked and hard to make out at first glance. In other words, the site was accessible, but the images might have been inaccessible.

Landmarks: No clear landmarks have been observed.

Nodes and communication: the site is located along the Etnefjord and would have been passed by anyone heading for Etne, or leaving Etne by boat. Reaching the site from land is also easy. Etne is defined as a local centre.



Figure 67 Fjøsna. Photo: Egil Bakka 1956, © Bergen Museum.

Flote 1

The site is located at some distance from the Storavatnet lake, and relatively far from the Etnefjord. There is a good view of the lake and area surrounding it, including some other sites along the lake. The site is located on a large characteristic boulder on a small terrace above the present houses. A river runs next to and below the boulder and the old road used to pass by the site. The boulder is accessible and easy to reach by foot, and it is visible from the area surrounding the lake. Thus the site has a dominant position in the area. However, the images

might have been somewhat difficult to see, as the boulder is flat and the inclination is substantial. Anyone wanting to see the images must climb up onto the boulder, or stand at its top and look down. The images might only have been available to a small number of spectators unless the lighting conditions were good. However, its accessibility and its dominant position give the impression that this is a public place.



Figure 68 Flote 1, the large boulder perched on the edge of the terrace, just off-centre in the photo. Photo: M. Wrigglesworth.

Landmarks: the boulder itself might be considered as a landmark, as it is large and looks flat from a distance, and it is easy to spot as it differs from other boulders and outcrops in the area.

Nodes and communication: Flote 1 is considered as a node, it has a central location in relation to the mountains and any communication routes from the east, and in relation to the lake and traffic coming up from the Etnefjord.

Fonnaland 1

The site consists of three ships, and one groove that is likely the remains of a fourth ship. The images are arranged vertically, in what appears to be two pairs. One ship is dated to the end of the Early Bronze Age, the remaining two have been given a general Bronze Age date but are most likely period 3 as well (cf. chapter five; see appendix A and D). The site is located on an outcrop at the foot of a cliff facing the sea, and the terrain slopes down towards the sea. When the images were made there would have been naked rock surfaces here, almost rising out of the water. As a modern road was built almost directly in front of the site, the original landscape context has been severely disturbed. The road now creates a visual barrier when facing away from the panel. To the southeast there is a small headland. The view to the sea is partially obscured by vegetation, the road, and modern farm buildings. However, if these had not been present, there would have been a clear and wide view of the fjord from the site. Today the site is approx. 20 metres above the present shoreline. In the middle of the Bronze Age, the level was around 8 metres according to recent shoreline data, indicating that the images were not at the water's edge, and the implication is that the site would have been visible and accessible from the fjord as well as on land.

Landmarks: the cliff could be considered as a landmark. The characteristic Samla mountain is located straight across the fjord and can be seen from the site. The island Kvamsøy is also visible from the site, it has a characteristic profile when seen from the site. A bronze socketed axe was found on the island.

Nodes and communication: The site is located along the main line of communication, and there are small bays in the vicinity that might have functioned as harbours. I consider the site as a meeting-place and a node. The images are probably the result of a limited number of visits, but the site could still have been used without adding more images. The site is considered as public, as it is accessible and near the fjord.

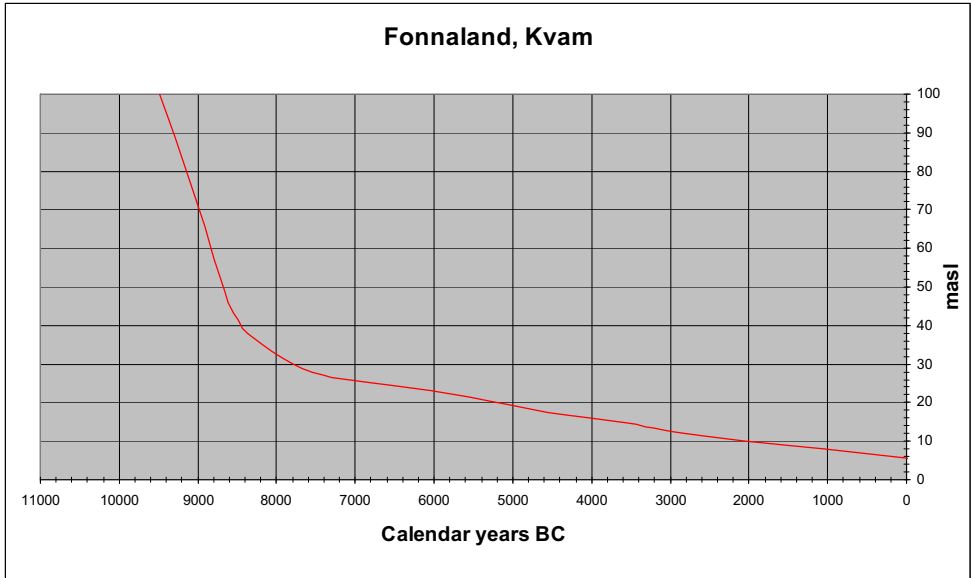


Figure 69 Shoreline diagram for Fonnaland.



Figure 70 Fonnaland. Photo: M. Wigglesworth.

Hammarhaug 1

The site has a similar location to Berge as it is located at the foot of a hill, 9 m.a.s.l. As the shoreline displacement curves for this area indicate that the shoreline was about 8 metres higher in the Early Bronze Age, the site would have been at the water's edge, much like the situation at Berge. There would have been a wide and shallow bay in front of the panel, flanked by two promontories. From the site there is an extensive view of the fjord and the mountains across the fjord, which is wide and open at this point. When approached from land, the panel is visible from all directions today, but with a higher shoreline it would have been visible from land when approaching from a westerly direction. The landscape context is changed not only because of the shoreline displacement, but also because a road was built in front of the site, causing part of the hill to be removed. As a result, it is possible that the view to the site originally might have been more obscured from the east. Nevertheless, the site is at the foot of the highest part of the hill, which would still have been visible. The location is dominant and monumental, and with a higher shoreline the rock would appear to rise out of the water – at least from a distance. The site is interpreted as a public site.



Figure 71 Hammarhaug. Photo: M. Wigglesworth.

Landmarks: the hill might be considered as a landmark, otherwise no distinct formations in the vicinity.

Nodes and communication: The site is located along the fjord, the main line of communication. It should be noted that another sailing route passes the site; this route is used to go from Hardanger to the Bjørnefjord, north of Tysnes. The site is considered as a node, as it has a variety of motifs and was used over a long period, and was probably an established meeting-place.

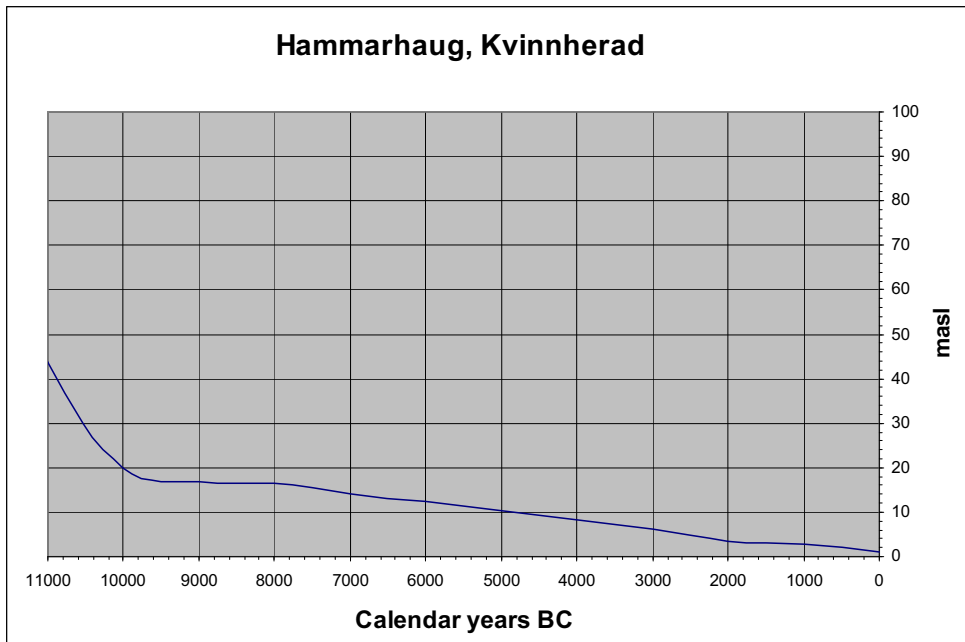


Figure 72 Shore line displacement curve for Hammarhaug.

Linga I

The site is located on an outcrop that runs down to the water, forming an edge in the landscape. At least 12 ships have been identified, most of which are Mandt's type A1, dating the site to the Early Bronze Age. The other ships can be dated to the Late Bronze Age. The remaining figures are fragments, probably of ship images. There is a good view of the surrounding area, and there is a wide view of the fjord from the site, partially obscured by three little islands. In the Bronze Age, these would probably have been little more than small skerries, so that there would have been visibility from the fjord to the place. However, since the outcrop slopes down to the water, the view to the north is partially obscured until one reaches the end of the outcrop. The rock has similar qualities to Vangdal 1 further north: both face land rather than the fjord directly, and both slope down to the sea. The lowest image is found 10 m.a.s.l. and in relation to the shoreline displacement curves for the area the water would have reached up to the rock (figure 73, 74). It should be noted that the lowest part of the rock has actually been destroyed, as it was blown up with dynamite some decades ago. Whether there were images on the destroyed rock is unknown. Linga is not as monumental and dominant as Vangdal, although the place would have been visible from a distance, the outcrop itself might not be as easy to spot. The site is easily accessible from land and sea.



Figure 73 Linga. Photo: M. Wrigglesworth.

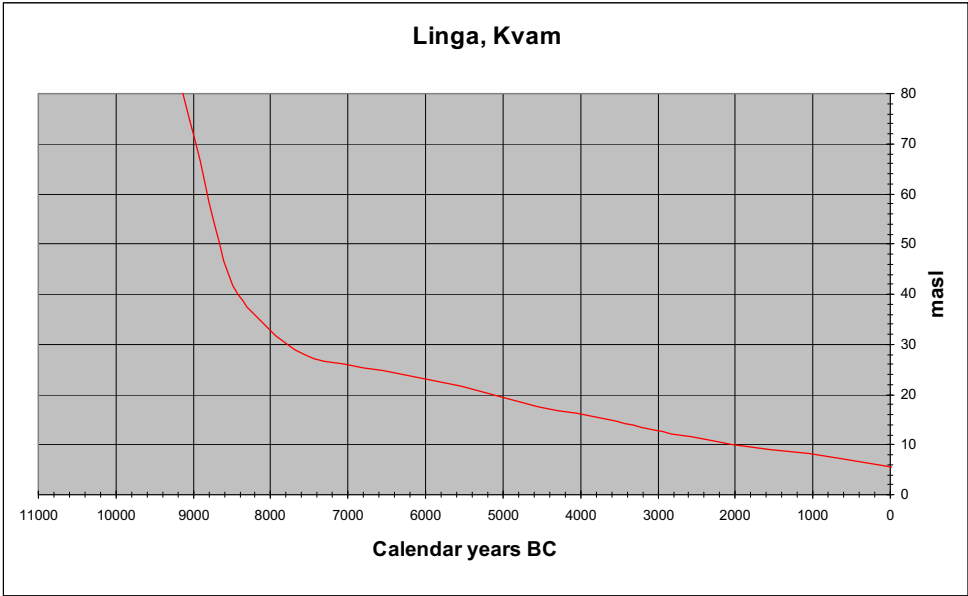


Figure 74 Shore line displacement curve for Linga.

Landmarks: no landmarks have been observed. The site could be a landmark in itself.

Nodes and communication: The site is located on the shore along the fjord, the main line of communication and is considered as a node. The high number of images indicates use in both the Early and Late Bronze Age, so the site was well established throughout the Bronze Age.

Svolland 1-3

The site is located on a rock outcrop in a small bay, close to the sea, but facing away from the sea, at the mouth of the Ålfjord. Panel 1 is more or less vertical. With a higher shoreline, the water would have come up in front of the small surface where the images are found. The outcrop constitutes an edge, and the site is visible from the bay. The site is accessible and I consider it as public.

Landmarks: No obvious landmarks have been observed.

Nodes and communication: The site is located at the mouth of the fjord leading to the inner parts of Sveio and Vindafjord (Ølen). The bay is also one of few good natural harbours along this part of the fjord, and is the last good harbour until Utbjoa. Thus I consider the site as a node.

Utbjoa 1-6

The site consists of six panels spread in a small area that is now part of a cultural heritage and nature trail. Three panels are horizontal, the rest are found on vertical surfaces. There is a good, extensive view of the fjord and surrounding area from all sites. The vertical panels, Utbjoa 1, 2 and 4, are only visible to a passerby from certain directions, most easily from the sea. Utbjoa 3 is horizontal, and although the place is open and visible, the panel itself is difficult to see. There is a small hill nearby, with a cairn, and the panel could more easily be observed from the hill – all figures can be seen from this vantage point. One can also see the figures when standing or moving around the panel. Visibility from the panel is good, while visibility to the panel is variable. However, it is accessible and it is possible to see towards the place from the surrounding area, even though the panel itself cannot be spotted. A large group of people could have been gathered here, and so it is possible that this was a public panel. The other panels would have been visible depending on the direction of the approach. Utbjoa 5 and 6 consist of cup marks and are both found on low horizontal, flat panels; the panels are hard to distinguish from the surroundings.

Landmarks: No obvious landmarks near the panels, but Utbjoa 1 and 2 are found on flat oval rock surfaces that could potentially be considered as landmarks, viewed from the sea, as the rock surfaces are clearly distinguishable from their surroundings.

Nodes and communication: The site is located close to the fjord, and would have been passed by ships heading for or coming from the Etnefjord. Utbjoa 4 and 5 are located in a bay, which is the first good harbour between Svolland and Utbjoa. For this reason I consider Utbjoa as a node, although the panels are somewhat spread out.



Figure 75 Utbjoa 1 and 2, located on the oval surfaces to the right. Note how the panels are distinguished from their surroundings. Photo: Egil Bakka 1953, ©Bergen Museum.



Figure 76 Utboja 1 and 2 seen from land. Photo: M. Wrigglesworth.



Figure 77 Utboja 4. Photo: M. Wrigglesworth.

Vangdal 1-3

The site consists of three panels, two of which are found at the top and the foot of a cliff. The third panel is placed at some distance from the outcrop about five m.a.s.l. and is of uncertain date, although the location relative to the shore indicates a date to the Iron Age. Vangdal 1 is located at the foot of the outcrop, and consists of ships type A1/B1, suggesting an Early Bronze Age date; and possibly that the carvings were made within a relatively short period, as they are very similar. One boat appears to have been re-carved, indicating repeated visits to the site. The outcrop is a dominating feature in the landscape and is visible from a considerable distance from the fjord, but not necessarily when moving on land. The outcrop does not face the sea directly. Depending on what route one takes to the panel, it is not visible until one approaches the panel (figure 78, 79), but the cliff is partially visible at all times. An unknown factor here is that the area surrounding the site has been farmed for centuries, and we do not know to what degree it has been modified through the centuries. With a higher shoreline than at present, Vangdal would have been a good landing place for boats, and there are also several bays in the vicinity that could have been used for landing boats. It is worth noting that Vangdal 1 would have been visible to anyone passing by in a boat sailing close to land and heading northeast into the inner fjord, as the panel faces southwest. Similarly, Vangdal 2 would have been easier to see for anyone heading out to the coast from the inner fjord, as the panel faces the northeast. This panel has images that are dated to the Mesolithic and Neolithic.

Landmarks: The cliff where Vangdal 1 and 2 are located, is a landmark in itself, the rock face is visible over a long distance from the fjord (see figure 78).

Nodes and communication: traffic along the fjord would have passed the site. It is possible that there could have been settlements in this area in the Bronze Age, and in light of recent excavations at Flatebø (chapter four and section 6.2.2 below) I would expect those sites to be located higher up in the landscape. I consider the site as a meeting-place that was established and used over a long period, and thus functioned as a node.



Figure 78 Vangdal seen from the fjord. The slanted rock outcrop is clearly visible. Photo: M. Wrigglesworth.



Figure 79 Vangdal 1 to the far left. Vangdal 2 is located at the top of the cliff. Note the relationship with the sea. Photo: M. Wrigglesworth.

Årsand 1

The site is the only site with painted images in the study area, and one of only two painted sites in Hordaland county. It is located on several small surfaces in a small rock shelter at some distance from the fjord, about 50 m.a.s.l. The view from the site is extensive and takes in the fjord and surrounding landscape. The hillside is presently covered in vegetation, making an impression of the structuring elements in the landscape difficult. The place is visible from a distance, although the shelter is hard to discern as it is little more than a crack in the rock. Thus one would have to know where the rock shelter is in order to know what one is looking at. Visibility from the site is more extensive than visibility to the site. As one walks up towards the site from the fjord, the view is partially obscured by the hill, depending on which direction one takes. The site is accessible, but does not accommodate a large group of people, so I interpret this site as accessible but with a private and somewhat secluded character.

Landmarks: No topographical features are particularly distinct.

Nodes and communication: The site is relatively close to the sea and the Hardangerfjord, the main line of communication. As it is secluded, I do not consider the site as a meeting-place intended for a larger audience.

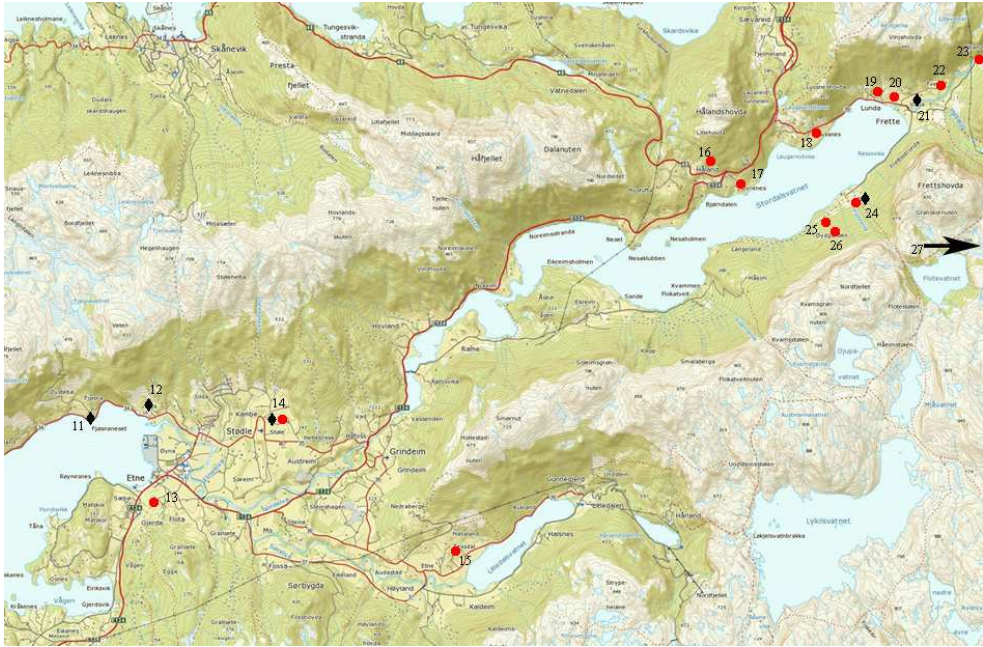


Figure 80 Rock art sites in Etne. Red dots indicate cup mark sites, black diamonds indicate figurative sites. 11: Fjøsna, 12: Fitja, 13: Haugen, 14: Støle, 15: Tesdal, 16: Håland, 17: Øvernes, 18: Lussnes, 19: Lunda, 20: Skiftedalen, 21: Vinje, 22: Tveito, 23: Volme, 24: Flote, 25: Øygardsflote, 26: Øygarden, 27: Holsnanuten. Map with kind permission from gislink.no, reworked by the author. Map from Norway digital and the Norwegian Mapping Authority.

6.3.2. Graves

Four mounds dated to the Bronze Age have been excavated and are the only graves known from this period in Etne (Vevatne 1996; cf. chapter four above). The excavated mounds are, as seen in chapter four, located on the terraces in the valley leading up from the Etnefjord. These terraces have been used for burials for a long period of time; at Sørheim and Grindheim farms, a large number of mounds have been documented and excavated and the majority is dated to the Iron Age. In addition, there are cairns that could be Bronze Age based on location, on several promontories. It should be noted that cairns from the Bronze Age and the Early Iron Age often have the same type of location. At Nervik farm several cairns are spread on small promontories. At Byrkjenes promontory in Etne there is a large cairn, and at nearby Byrkjenesklubben promontory there are six cairns; one of these was large and contained two urns (Fett 1968). The cairns are oriented towards the shipping lane and the Ølenfjord. There are also possible Bronze Age cairns along the Ølenfjord. Interestingly, an old land route went from Ølen to Sandeid in Rogaland county. This route could have been used in the Bronze

Age, thus avoiding the Sletta area along the coast of Haugesund and Sveio, which is a treacherous stretch of sea even for modern ships (Fett 1968).

One dated cairn is known at Gjerstad in Tysnes municipality, dated to the Late Bronze Age based on the pottery found inside the cist. The cairns are located on promontories, on islands, and at the entrance to sounds and bays. In addition, a cairn dated to the Bronze Age is known at Uggdalsdalen farm, at some distance from the shore in an area with good agricultural land. Here, three cairns were excavated in 2004; two were dated to the Iron Age, while one was dated to the Late Bronze Age. This cairn was located on the border between the modern field and a marshy area and most of it had already been removed. The burial was set in a natural chamber in the rock, and contained pottery shards and charcoal, which gave a date of cal BC 930-840 (Handeland 2005). Although one should be careful with equating cairns with the presence of farms, contemporary settlement in this area is possible. This burial also indicates that there is more variability in the location of Bronze Age cairns, they are not all found near the shipping lane. A number of possible Bronze Age cairns are found along the northern coast of Tysnes.

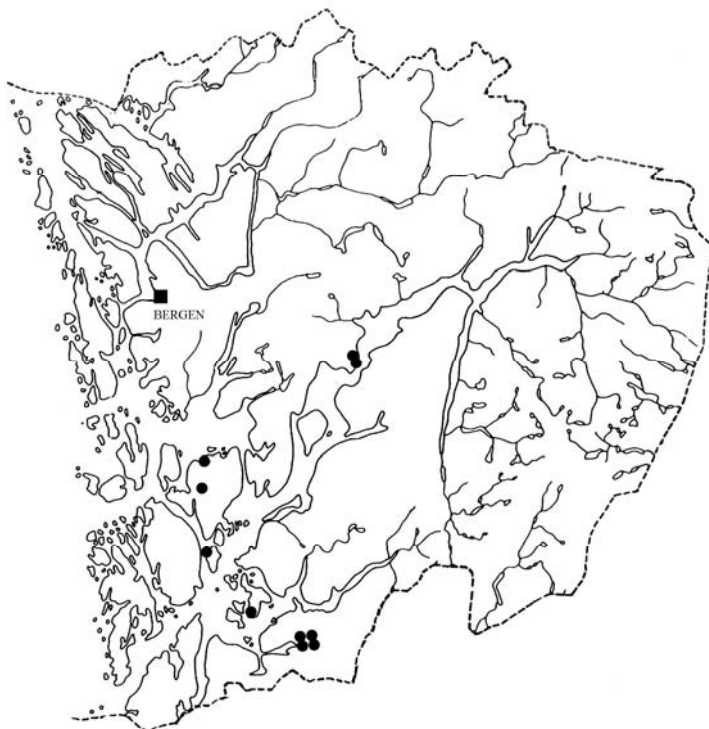


Figure 81 Graves in zone 2.

Further south there is one dated cairn on a point at Nordhuglo island, in Stord municipality. The sound between the island and the Stord island is a likely sailing route, and there is a good view of the sound.

Two excavated cairns at Eide in Kvam are dated to the Bronze Age, these were both located on a promontory that sloped into the sea. The fjord is rather narrow at this point, and there is a good view of the fjord. Several possible Bronze Age cairns are known in Kvam. At Fonnaland farm, there is a cairn on an outcrop close to the sea; there are cairns at Aksnes, Flotve, Steinstø, Nes farms. At Rykkje, there are cairns on two promontories, near the mouth of the Fykkesund inlet. The cairns at Steinstø are located on the other side of the inlet. There are three big cairns at Ljones farm, and further southwest there are cairns at Breievne farm. At Vetletveit farm a big cairn is located on a ledge that drops straight into the sea.

At Sålesnes promontory in Jondal, there is one cairn and another three cairns on two promontories nearby, Jonaneset and Byrkjabein. At Herandsholmen, a small island at Herand, visible from Bakke rock art site, there is one possible Bronze Age cairn. At Kysnes there is a large cairn on a promontory, and at Samlaneset, at the foot of mount Samla, there is a cairn. Again, the possible Bronze Age cairns are located on promontories and relatively high up in the landscape.

Similarly, in Kvinnherad there are several possible Bronze Age cairns. There are cairns at Maurangsnes promontory, at the mouth of Maurangsfjorden, and there are cairns on promontories on the islands Halsnøy, Fjelbergøy and Borgundøy. At Halsnøy there are possible Bronze Age cairns at Sjo, on a couple of small skerries. There are several other cairns at Sydnes, where the only grave that can be securely dated to the Late Bronze Age in Kvinnherad is located. At Borgundøy there are cairns on promontories at Karteig and Gjerde, along the sound, and at Fjelbergøy there are cairns on promontories at Nordhus and Fjelberg.

Nodes and communication: In Etne, the mounds are located on the terraces, on land that was sometimes used for cultivation, as ard furrows were found under Garahaugen mound. There would have been roads or paths leading to the areas further up the valley. The cairn at Sydnes is located along a sound and would have been passed by traffic, which is also the case for the cairn at Nordhuglo. The cairns at Eide were located along the fjord. The cairns are located

near sea routes and passages. The mounds on the terraces in Etne would have been dominating and monumental in a flat landscape, and could have functioned as meeting-places.

6.3.3. Settlement sites

Several settlement sites with Bronze Age dates have been excavated in zone 2: Flatebø, Kvitevoll and Skåla, all in Kvinnherad municipality. Kvitevoll is located on Halsnøy island, and no other prehistoric finds are known from this farm, but several cairns are known from farms close by. A large number of structures were discovered and excavated in 2004, ranging in date from the Neolithic to the Middle Ages (Engedal et al 2006). Some interesting finds were made, including two pits filled with clay, buildings with Bronze Age dates, cooking pits and evidence of cultivation and possibly also metalworking. The excavation identified a cleared and continuously cultivated area, where charcoal appeared to have been used as fertiliser. On the outskirts of the field there was a small lake or bog in the Late Neolithic and Early Bronze Age, and here two large pits filled with clay, including burnt clay and what was interpreted as pieces of wattle-and-daub, were excavated. The excavators interpreted the pits as storage pits for clay to be used in pottery production. The location was moist, and would have softened and kept the clay ready for being worked. Pieces of raw asbestos were also found, another indication of pottery production. A large number of pottery shards tempered with asbestos as well as quartz and rock was found, including shards of pots of “Risvik”-type, which are typically dated to the Bronze Age (cf. Ågotnes 1986). In addition a shard was interpreted as a fragment of a crucible (Engedal et al 2006: 21, 37), which could indicate bronze casting on the site. Some of the ceramics were interpreted as possible remains of ovens used either for casting bronze or making pottery. Two arrowheads were found, one triangular with a concave base and one leaf-shaped with a convex base. Both are types that are dated to the Late Neolithic and Bronze Age (e.g. Prescott 1991; Aksdal 1996). The buildings are particularly interesting, because they are small and do not appear to have been used as living quarters. Building 8 consisted of four unevenly spaced postholes and a ditch-like structure that was identified on two sides of the building, the building measured 7x7 metres and was square or rectangular (Engedal et al 2006:43). The ditch could have had two functions, either as a drainage ditch or as a foundation for a wall, but no evidence of postholes or wattle-and-daub was found, which would have been expected if this had been a wall. A sample from the structure gave a date to 3110±40/cal BC 1420-1380, cal BC 1440-1290, and a sample from a posthole gave 2990±40/cal BC 1290-1140, cal BC 1380-1100 (ibid: 44). Shards of pottery tempered with quartz were found in one posthole. Building 10 also consisted of four postholes

and was rectangular. Charcoal from a posthole was also dated to 2990±40/cal BC 1290-1140, cal BC 1380-1100, and small fragments of bone were found in two postholes (ibid: 46). Several other houses were identified, with dates in the Pre-Roman Iron Age. A date from a hearth in building 7 gave a date to 2330±100/cal BC 780-170 BC (ibid: 53). An interesting feature was a pit that contained slag, pieces of soapstone and glazed clay, indicating temperatures around 900-1000 degrees Celsius, which is indicative of metalwork or firing pottery (ibid:54). Ard furrows were also documented.

Kvitevoll is an interesting site because it was used continuously from the Late Neolithic to the Iron Age, and because the activities here were very specific: cultivation, pottery making, and possibly metalworking. As the few excavated sites in this region usually only indicate cereal cultivation, this is a unique site that gives us an insight into farm activities in the Early Bronze Age. The houses were small and are thus unlikely to have been used as living quarters compared to other excavated Bronze Age houses in West Norway. Such houses are larger and longer, and might well lie underneath the modern houses and the modern road in the area. The small houses could have been used in connection with the documented activities. The Late Bronze Age grave at Sydnes is located further along the coast of Halsnøy to the south of this site.

I will now move on to another interesting site at Flatebø farm in Nordrepollen, a small inlet of the Hardangerfjord. At the head of the inlet the landscape opens up into a valley and the site was located in a slope, about 70 m.a.s.l. There are several finds from the area including a piece of worked quartz from the Stone Age, as well as soapstone objects from the Iron Age, according to the archaeological catalogue at Bergen Museum. In addition there was a stone wall system interpreted as a drove way leading to the outfield. These structures are used for leading cattle to pasture but could also enclose or mark fields. Several trenches revealed prehistoric cultivation as well as evidence of prehistoric landslides (Slinning 2007:7) in relation to the stone walls. A posthole (2550±60 BP/cal BC 820-500, cal BC 460-430) and a structure interpreted as a hearth or cooking pit were found in the lower layers of the upper trench, and the lower layers also contained pollen such as *Plantago lanceolata* that indicate grazing (Halvorsen and Hjelle 2007). Wheat pollen was identified in a layer dated to the Pre-Roman Iron Age.

A trench was opened on a terrace near the outfields, and here postholes and a hearth were found. One posthole was radiocarbon dated to 2960±70 BP/cal BC 1390-970, indicating a settlement in the Bronze Age. The postholes were interpreted as belonging to the same building, more precisely the gable end (Ibid: 18-21). Ard furrows were found few metres from the postholes. The pollen botanical report indicates that the area was first cleared in the Bronze Age, when it was covered by deciduous forests consisting of hazel, lime, elm and oak, and it was used for grazing at first. In the course of the Bronze Age and in the Pre-Roman Iron Age, there is pollen evidence of cereal cultivation as well as grazing indicators (Halvorsen and Hjelle 2007). What these finds tell us is that steep slopes were cleared and used for cultivation and grazing as well as establishing settlements from the Early Bronze Age onwards. The ard furrows also indicate that the fields were located close to the houses; alternatively this could indicate that fields and houses were rotated. Bronze Age settlements could thus be located in this type of location in other parts of Hardanger as well, a possibility that opens up new ways of understanding the use of landscape. Although the ground is steep, the place was chosen for building houses, presumably with interior levels, and it appears that closeness to the fields was important in choosing where to build a house. It would be easier to clear a field in a slope and a higher location would mean more light, which was important when you lived in the inner parts of a fjord surrounded by high mountains. Early settlements in this type of location have recently been documented elsewhere in Hordaland. Houses and fields dated to the Late Neolithic and Early Bronze Age have been documented at Nyre in Voss and Rivenes at Osterøy island (Askeladden database).⁸

A site with Bronze Age dates has also been excavated at Jensajordet in Rosendal in Kvinnherad. The excavation uncovered 25 houses, cooking pits, evidence of cultivation, a burial cairn and other evidence of activity (Handeland and Diinhoff in prep). The houses are dated to the Late Neolithic, Early Bronze Age, Late Bronze Age, Pre-Roman Iron Age, Roman Iron Age, Migration period, Viking Age and Middle Ages. One cooking pit is dated to the Late Bronze Age (2450±50 BP/cal BC 780-400 (Beta-249056)). The houses from the Late Neolithic and Early Bronze Age are two-aisled, while the houses dated to the Late Bronze Age are three-aisled. House T is dated to the Late Neolithic through radiocarbon dates of post

⁸ At Rivenes at Osterøy in northern Hordaland, two small houses and a fossilised field (Askeladden ID no 112503-1, 112503-2, 112503-3) were found in a location called Gloppestølen 160 m.a.s.l. One of the houses was dated to the Late Neolithic, while the second house and the field were dated to cal BC 1760-1530 and cal BC 1650-1420. A second field was found at 145 m.a.s.l. (Askeladden ID no 112508-1), and was dated to cal BC 1650-1420. At Nyre in Voss a fossilised field dated to cal BC 1900-1530 was found at 130 m.a.s.l. on a steep slope (Askeladden ID no 110984-1).

holes to 3600±60 BP/cal BC 2130-1860/1850-1770 (Beta-249052) and 3730±40 BP/cal BC 2280-2250/2220-2020 (Beta-249053), while house A is dated to 3510±40 BP/cal BC 1940-1740 (Beta-249049). Several houses have dates from the Late Neolithic and Early Bronze Age: Two postholes from house F are radiocarbon dated to 3390±40 BP/cal BC 1760-1610 (Beta-253016) and 3580±40 BP/cal BC 2030-1870/1840-1820/1790-1780 (Beta-249039). A posthole from house S is dated to 3470±40 BP/cal BC 1890-1690 (Beta-249048), a posthole from house U is dated to 3390±40 BP/cal BC 1760-1610 (Beta-249045) and from house X there are two dates from postholes to 3460±40 BP/cal BC 1890-1680 (Beta-253017) and 3450±40 BP/cal BC 1880-1670 (Beta-249038). These dates indicate that at least two houses existed at the same time, house F and U, probably also house X. Two layers from a structure, A501, containing pottery shards and debitage, have been dated to 3580±50 BP, BC 2110-2100/2040-1860/1770 (Beta-249035), and 3600±60 BP, BC 2130-1860/1850±1770 (Beta-249036). Thus the site can be considered as a local centre along the Hardangerfjord, not least because of other finds such as three type VI flint daggers in the Rosendal area, indicating early settlement, as well as bronze axes.

Three houses are dated to the Late Bronze Age, and again, the contexts are postholes. House I has one radiocarbon date to 2475±35 BP/cal BC 765-425 (TUa-4843), while house J has a date to 2770±40 BP/cal BC 1010-82 (Beta-249055). House K has two dates: 2720±40 BP/cal BC 930-800 (Beta-249054) and 2485±40 BP/cal BC 765-515 (TUa-4842) (Handeland and Diinhoff in prep). Here we see that there are two or three phases of settlement. Other finds from Rosendal at this time is a bronze socketed axe with no provenance and a socketed axe from Nes.

Jensajordet is particularly interesting because there are houses spanning more than 3000 years at the site, from the Late Neolithic to the medieval period, indicating more or less continuous settlement here. Rosendal is an excellent area for settlement – there are good flat areas for cultivation, the mountains and sea are close, and the island Snilstveitøy shelters Rosendal and the bay from the fjord, so this is a good natural harbour.

In Jondal, several rock shelters have been excavated and three shelters have Bronze Age dates. The layers dated to the Bronze Age are thin, indicating repeated short stays. Bones from domestic animals as well as fish bones have been found. Sævarhelleren rock shelter has provided the majority of finds. A cooking pit and a cultural layer were dated to the Early

Bronze Age, while a structure containing pottery, fire cracked stone, bone and quartz flakes was dated to the Late Bronze Age. This rock shelter was used in several phases from the Mesolithic to the Iron Age (Bergsvik 2008), and the excavation uncovered a layer dated to the Late Bronze Age containing bones from domestic animals (Hufthammer 2008:221) as well as fire cracked stones and several pits. Another shelter, Vasselhellere, located about 200-300 metres northeast of the panels at Bakke, also contained animal bones and thin cultural layers dated to the Late Bronze Age/Early Iron Age (Bergsvik pers. comm. 2006).

Settlement indications are known in Etne as well, in chapter four we saw that ard furrows were found underneath the Garahaugen barrow which is dated to period 2-3, suggesting that it was constructed on a field. The barrow is located at Sørheim, a terrace that would have provided good agricultural conditions. The Lundahaugen barrow on the same terrace was built over a cooking pit and charcoal dated to the Late Neolithic and Bronze Age. At Tjelmeland, a survey uncovered a cultural layer that was dated to the Early Bronze Age through two radiocarbon dates to 3060±bp/ cal BC 1415-1165 (T-11970) and 2995±35 bp/cal BC 1265-1143 (T-11971). In addition, shards of asbestos pottery, pieces of asbestos, flint, burned bones and fire cracked were found (B15403/1-37). The cultural layer was quite deep (Kutschera 1995; Madsen 1995).

6.4. Zone 3: Granvin, Ulvik, Eidsfjord, Ullensvang, Odda

Zone 3 is the inner mountain area of Hardanger, characterised by high and steep mountains and narrow lesser fjords (Sørfjorden, Granvinfjorden, Eidsfjorden, Osafjorden). I have been unable to visit some sites, e.g. Ullshelleren rock shelter which is now located at an artificial lake at a hydropower station. Other sites are difficult to locate due to vegetation, and some panels have no provenance.

6.4.1. Rock art

Aga 1

This is a small panel with one concentric ring motif. The panel is found on a low outcrop located on a small slope forming an edge in the landscape. A small spring was located here, this has been drained. The present distance to the sea is around 80 metres, and the slope towards the sea is broken by an edge, effectively sheltering the site from being seen from the sea. There is a good view of large parts of the Sørfjord and the settlements on the opposite

side of the fjord. The outcrops partially conceal the view to the site from the sea, and from land it would have been visible from most directions, but only when close to the panel. Although the site is accessible, it is set back from the shore and thus I have interpreted this as a less public location. However, activities here might still have been meant for a larger audience.

Landmarks: No clear landmarks can be determined.

Node and communication: Aga is centrally placed on the western flank of the Sør fjord. Historically, Aga has been a large and rich farm and various prehistoric finds attest to the importance of this place. Thus Aga is defined as a node.



Figure 82 Aga 1. Photo: M. Wrigglesworth.

Haustveit

This site is found on a large boulder located on a small terrace about 200 m.a.s.l. above the Sør fjord. The images are found on several small panels facing all directions. The hillside behind the boulder is covered by an ancient scree and vegetation. From the edge of the terrace the terrain is steep and there are more terraces on the hillside beneath. There is an extensive view of the fjord from the terrace, the view changes as one moves around on the terrace. The

site is not visible until one arrives on the terrace, except when entering the site from the east, where there is a modern tractor road. From a distance it is possible to see the terrace from the fjord, but the boulder would have been hard to distinguish as it does not lie on the edge of the terrace, and any surrounding vegetation that might have existed could have obscured it as well. Thus I have interpreted the site as private, but accessible.

Landmarks: no clear topographical formations can be identified.

Nodes and communication: Today there is a road leading up to the terrace and beyond, due to timber industry in the area. However, it is plausible that paths leading up to mountain pastures could have existed in the vicinity, especially as Hauso 1-4 is located further up the mountain. The site is considered as a meeting-place, and as a pair of Neolithic axes was found near the boulder, this was an established place, used over a long period. Thus Haustveit is interpreted as a node.

Frøynes

The site is located on a small outcrop 3 m.a.s.l, on a promontory called “Kvednarauga” (Eng. “the Kvednar eye”), probably after the cup and rings on the panel. The rock falls steeply into the sea, and it is difficult to move on the rock, so that the images are best seen from the sea. They are located on the edge of a landscape room, and are visible from the sea. There is a good view, and the location is also visible from the fjord, and one can see across to Aga. The site is public and easily accessible by boat. The shoreline data suggest that 3 m.a.s.l. indicate a date to the Viking Age. This is not impossible, of course, but seems a little too late to my mind. As mentioned in chapter four, the shoreline data are still not reliable for the Bronze and Iron Ages. I think an Iron Age date is likely for this site, possibly the Pre-Roman Iron Age, but it is impossible to offer any secure conclusions here. However, there is a cairn on top of the outcrop, which could be from the Bronze Age.

Landmarks: no clear landmarks

Nodes and communication: the site is located close to the water, and is available to anyone passing the site by boat. However, due to the location close to water and difficult access from land, I do not consider this as a meeting-place, other than by boat.

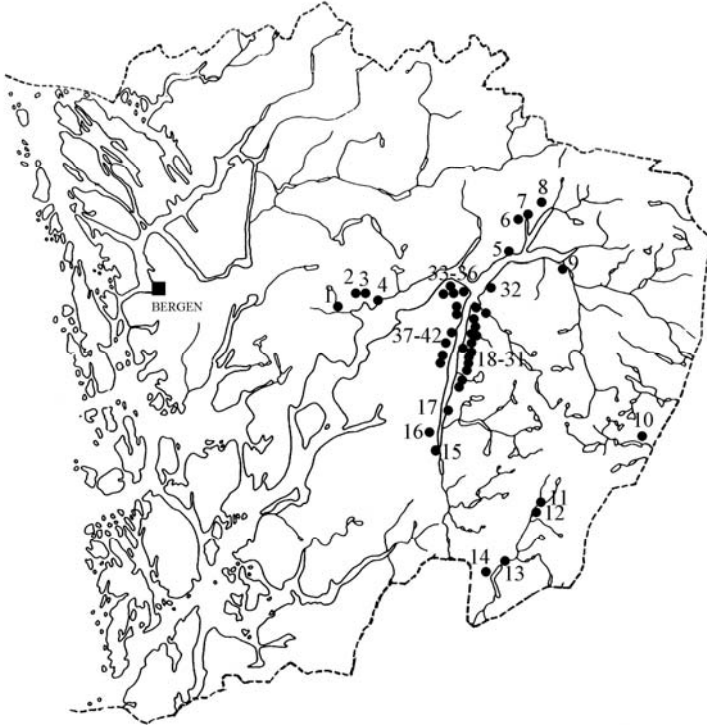


Figure 83 Rock art sites in zone 3. Key: 1: Nes, 2: Vik, 3: Nystøl, 4: Rykkje, 5: Hallanger, 6: Hjelmavoll, 7: Ljono, 8: Lekve, 9: Læg Reid, 10: Hansbu, 11: Ullshelleren, 12. Holo, 13: Hagen, 14: Horda, 15: Opheim, 16: Tokheimskaret, 17: Stana, 18-42: see figure 84.

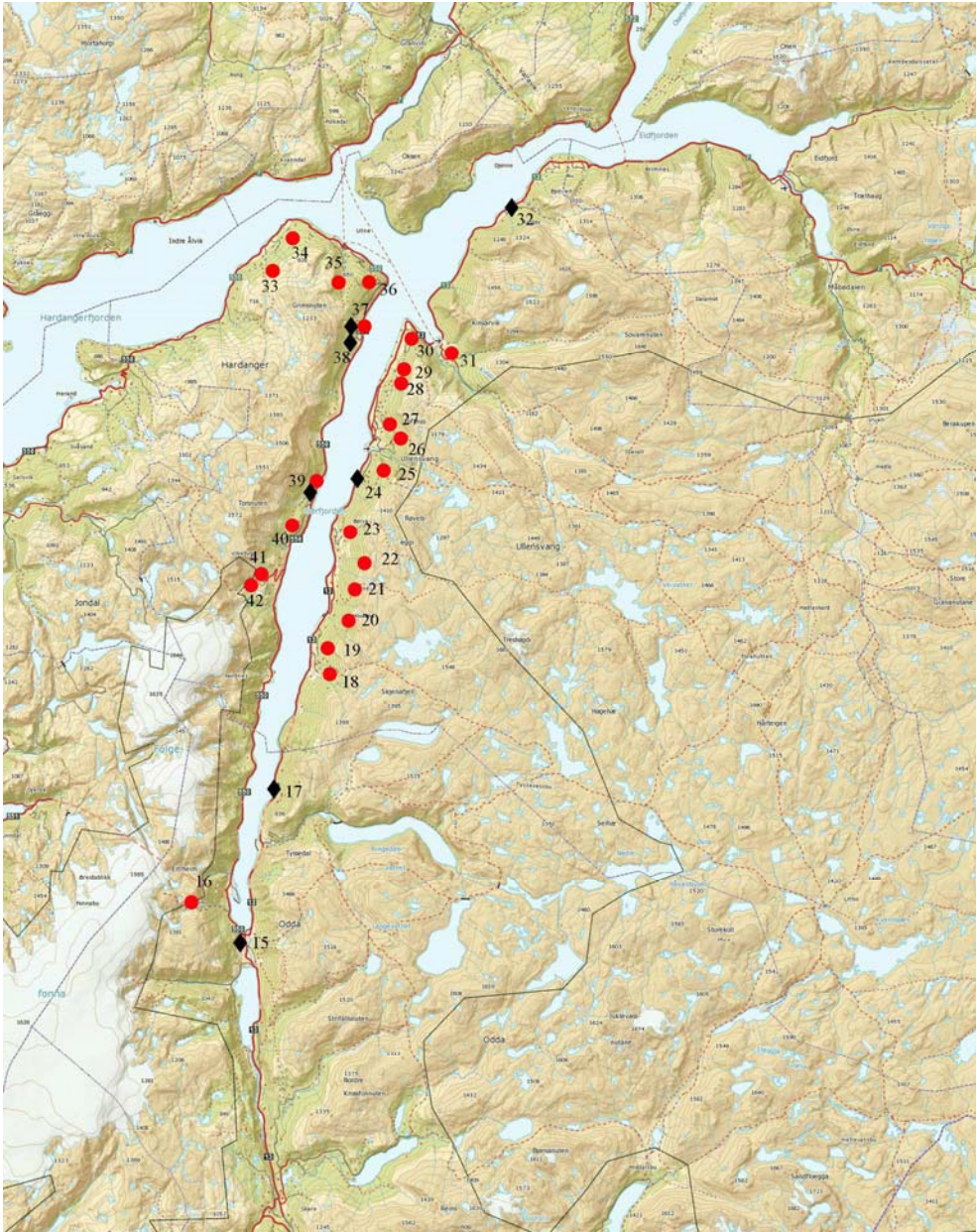


Figure 84 Rock art sites in Ullensvang. Red dots indicate cup mark sites and black diamonds indicate figurative sites. Key: 18: Bratt-Espe, 19: Meland, 20: Hovland, 21: Sekse, 22: Sandstå, 23: Børve, 24: Frøyne, 25: Ullensvang, 26: Opedal, 27: Lofthus, 28: Lutro, 29: Tveit, 30: Midnes, 31: Huse, 32: Ringøy, 33: Lote, 34: Hesthammar, 35: Utne, 36: Trones, 37: Hauso, 38: Haustveit, 39: Aga, 40: Rogdaberg, 41: Måkastad, 42: Reisetet. Map with kind permission from gislink.no, reworked by the author. Map from Norway digital and the Norwegian Mapping Authority.

The majority of cup mark sites in zone 3 are found on both large and small boulders and stones. The sites on the mountain slopes are usually found spread on terraces, often with a good view of the fjord and the surrounding terrain. Some are located on a huge boulder in the middle of a rocky terrace, but many are spread out to the sides of the terrace, marking the edges. These terraces have often been used as summer farms, some still have small houses, and others have remains of houses. Most importantly, the areas have been used for pasture, and many are now covered with vegetation as they are no longer used. The places used as summer farms are often grassy slopes, interspersed with rocks. In some cases there are old screens on the slopes.



Figure 85 The Kråkeflot terrace at Øvre Børve, 300 masl. Børve 15 and 35 are located here. Photo: Egil Bakka 1956, ©Bergen Museum.

In many cases there are several panels on a terrace, for instance at Børve, Opedal, Sekse, and Hovland. All boulders do not have cup marks, and some panels are found on low or small rocks. This indicates that these sites required local knowledge. A stranger to the mountains in Sør fjorden would probably not have been able to walk up to a cup marked stone without some prior knowledge. On the other hand, we do not know to what degree there were standardised rules or codes according to which the cup marked stones were selected and that people in West Norway would know.

Large boulder	Horizontal	Square/rectangular	Cup marks on top
Aga 4, 8 Børve 1, 10-12, 14, 18, 21-22, 24-31, 36- 38 Hovland 1-3, 6 Horda 1 Lekve 2-4 Lussnes 1-2 Lutro 2, 4 Opedal 7 Sekse 1-5, 7-9, 11 Skiftedalen 1 Tesdal 1, 3 Tokheimskaret 1 Trones 1 Ullensvang 1 Utne 1-3 Vinja 1-3 Øygarden 1 Øygardsflote 1-2	Børve 2, 9, 13, 18, 20-21, 23, 26-27 Hauso 1-3 Horda 1 Hovland 1, 4 Huse 1 Lofthus 1 Lote 1, 3 (outcrop) Lutro 2-3 Meland 1 Opedal 2-3, 6 Sekse 4-5 Tesdal 2 Tokheimskaret 1 Tveiten 1 Tveito 1 Vikøy 1 (outcrop) Øygarden 2-3	Aga 11 Børve 20 Holsnanuten 1 Opedal 2-3, 6-7 Sekse 5 Hauso 2	Aga 4 Børve 7, 9, 11, 15, 18, 20-21, 23-27 Hauso 1-3 Horda 1 Hovland 1-4 Huse 1 Lekve 8 Ljono 2 Lofthus 1 Lote 1, 3 Lutro 2-5 Meland 1 Måkestad 1 Opedal 2-3, 6 Sandstå 3 Sekse 1-5 Støle 1 Tesdal 3 Tokheimskaret 1 Tveiten 1 Tveiti 1 Tveito 1 Øygarden 2-3 Øygardsflote 1
59	33	9	51

Figure 86 Cup mark sites on large boulders, flat surfaces, square stones, and location on top of the boulder/outcrop. Based on descriptions in reports and my own observations, cf. Appendix A.

It is especially interesting that in most cases, the cup marks are found on top of the boulders, often on flat stones, i.e. horizontal panels. There are at least 51 examples of boulders or stones where the cup marks are found on top. I also find it striking that some panels are found on square or rectangular stones. I have found at least nine examples, where Opedal in Ullensvang dominates with four square stones. This indicates that rocks with unusual shapes are chosen for making cup marks, to some degree. However, the data set is too small to generalise here. At least 59 panels are found on large boulders, especially at Børve and Sekse in Ullensvang, and in Etne (Vinje, Øygardsflote). A large number of cup marked panels are found on horizontal panels, i.e. flat surfaces either on low stones or boulders with flat tops. Some cup marked sites on rock outcrops are also horizontal. I have noted 33 cases, a few in Etne, but most are in Ullensvang, and Børve dominates. As many sites thus are found on large boulders, and with cup marks on top, it would seem that cup marks were not always meant to be seen.

Some low stones or outcrops might not have been easy to see, and cup marks can often be hard to spot unless one is close to the panel. As most of the sites are found in rocky areas, it can be difficult to pick out the stones with cup marks. To my mind, this indicates that the sites were accessible and yet hidden – one would have to know which stones were decorated. Some panels are found on top of large boulders (e.g. Vinja 1, Øygardsflote), and taking a peek at the cup marks would have entailed climbing. However, they are located in areas that would have been used on a regular basis for pasture, so they are found near possible communication routes.



Figure 87 Børve 20, at Gunnhildstølen summer farm, 809 m.a.s.l. Cup marks on a rectangular and flat stone, marked by chalk rings. Photo: Egil Bakka 1956 ©Bergen Museum.



Figure 88 Børve 4 and view to the fjord. Photo: Egil Bakka 1956 ©Bergen Museum.

The cup marked sites contrast the figured sites, which in almost all cases are found on rock outcrops that are easily seen by strangers. In zone 2, the figured sites are found in open and accessible locations, and these places would have been easy to see, even for a stranger, although the rock art itself probably was not visible until one moved close to the panels. Vangdal 1, Linga and Berge would have been visible to anyone moving towards the inner parts of the fjord, as they are faced toward the mouth of the fjord. Berge is also located at the start of what would have been a wide bay. Vangdal is situated at a narrow part of the fjord, while Linga and Berge are found in a wide and open part of the fjord. This also applies to Hammarhaug, which is located at the mouth of the Hardangerfjord proper, and to get close to the site one would perhaps have to move slightly out of the natural route along the fjord.

This analysis does not, as stated above, reflect a prehistoric reality or prehistoric perceptions of the sites. However, it does contribute to a fuller understanding of the sites and why these particular places were chosen for making rock art, as well as the underlying structures in the landscape. The analysis indicated that the figured sites were located on edges and boundaries in the landscape – places that tend to be visible, accessible, and for the majority of sites in visible and striking locations: at the foot of large cliffs, sometimes rising out of the water. The cup marked sites are located on or near edges in the landscape, such as the terraces on the mountainsides. Some are found on stones and boulders in screes. Unlike the figurative sites, where the images generally are found on panels that face visitors, the cup marks tend to be located on panels that do not face visitors. Rather, the cup marks are oriented towards the sky. This suggests that one would need to know where the panels are in order to find them. In a landscape that was grazed by animals and the vegetation was managed through grazing, some lower panels might have been easier to see. One would still have to know where they were in order to see the images – even if one could see the stone, the images might not have been visible.



Figure 89 Hauso 2, a low, flat stone on the Hauso terrace. Photo: M. Wrigglesworth.

6.4.2. Graves

Only one securely dated grave is known in zone 3, the Nesjarøysi cairn at Utne, near the mouth of the Sørffjord (Bøe 1930). This cairn is dated to period 2 on the basis of the size of the cist and a bronze dagger found here when the stones were removed (cf. chapter four). However, there are several possible Bronze Age cairns in the inner fjord area. Further along the Sørffjord there are three cairns at Aganeset, not far from the excavated settlement site at Aga (cf. chapter four and section 6.4.3 below). Across the fjord at Frøyenes, there is a cairn on top of the outcrop where the rock art is found. At Nedre Børve there is a possible Bronze Age cairn at Rosten, it has an open dry-walled chamber and is located on an outcrop approx. 12 m.a.s.l. At the mouth of Eidsfjorden there are four cairns at Ulgenes farm, on two promontories. At Bruravikneset in Ulvik there are two cairns in a “classic” Bronze Age location on the promontory. Cairns are also located on a few other promontories in Ulvik, at Bagnsneset, and Kaganeset, as well as a cairn known as Kjetilsrøysi at Nesheim farm, along the fjord (Bakka 1963; Askeladden database). These cairns are located near the mouth of the Osafjord, leading into Ulvik village. A possible Bronze Age cairn is known in Granvin, at Håstabbaneset promontory, at the mouth of the Granvinfjord. The cairn is located at the edge of a precipice. All of these cairns are located close to the sea, ranging between 12 and 30 m.a.s.l. They are found on points or promontories, often on top and near the edge of the point, dropping into the sea. Thus they are located along the main lines of communication. Interestingly, some cairns appear to mark the mouths of the fjords, especially the Eidsfjord and the Sørffjord.

Landmarks: No obvious landmarks have been identified.

Nodes and communication: Utne is located close to the mouth of the Sørffjord, and any boats heading to or from the fjord would likely have passed the area.

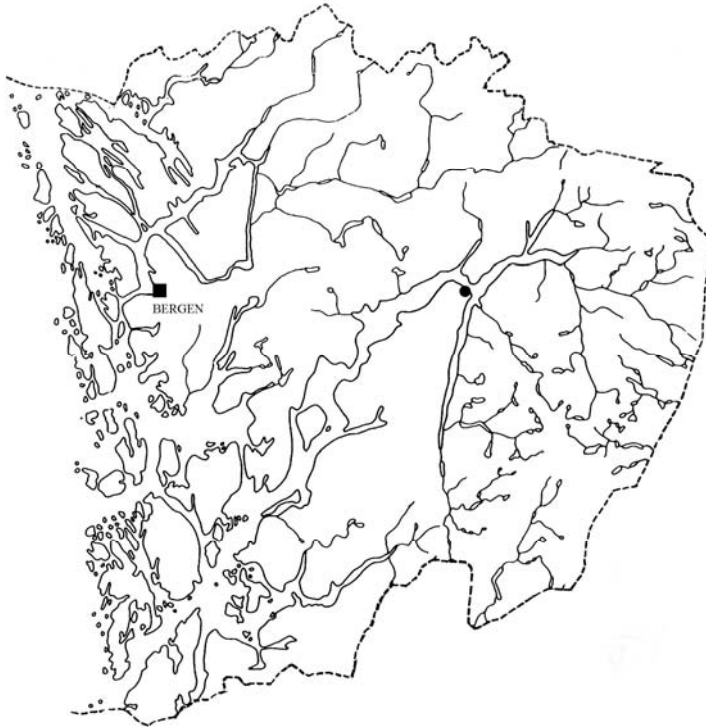


Figure 90 Graves in zone 3.

6.4.3. Settlement sites

There are few settlement sites in the inner fjord area, only one excavated site at Aga in Sør fjorden, while a series of charcoal-filled pits were uncovered at Opedal on the other side of the fjord, but these were never excavated (Fett 1954f). The pits were regularly spaced at 3-4 metre intervals and they were lined with stone slabs. There was also a ditch. Interestingly, a quern with a possible cup mark was found in-between the pits and an unfinished soapstone mould for a socketed axe (B 8903) was found about 20-30 metres from the pits. Unfortunately, the area was severely disturbed and an excavation in 1955 did not give any results (Bakka 1963). A stone axe of Late Bronze Age date was also found on the farm (B 74). These finds do indicate that there was activity here in the Late Bronze Age.

At Aga, a similar series of pits and a ditch were found during an excavation in 2005 (Berge 2008). Evidence of prehistoric cultivation was found when the site was first surveyed and during excavation, giving radiocarbon dates to the Early Bronze Age: a charcoal sample taken

from one profile gave 3460 ± 90 BP/ cal BC 1940-1520 (Beta-211723), while two samples taken during the initial survey gave 3400 ± 80 BP/ cal BC 1755-1535 (T-16559) and 3235 ± 95 BP/ cal BC 1615-1410 (T-16560) (Berge 2008; Jensen 2003). No indications of buildings were found. Two pits were radiocarbon dated to cal BC 50-AD 130 and AD 110-430, indicating use from the end of the Pre-Roman Iron Age to the Migration Period. The ditch surrounding the pits was dated to 2900 ± 90 BP/ cal BC 1380-840 (Berge 2008), which diverges from the interpretation of the ditch as related to the pits, but the context is somewhat unreliable as the area has been cultivated for several thousand years and the fill probably reflects this. Aga is historically a large and rich farm, with several Neolithic finds such as flint axes and flint daggers. As indicated above, there are also several cairns that are possibly from the Bronze Age as well as several rock art sites in the area.

In addition, a survey at Hovland in Sørfjorden uncovered a pit which was radiocarbon dated to 2670 ± 90 BP, cal BC 815, according to an entry in the Askeladden database (ID no106364-1). Six cup mark panels have been documented at Hovland, one panel in a secondary position and five panels at Hovlandsstølen, a summer farm approx. 600 m.a.s.l. At Audneland in Ulvik a test pit uncovered indications of prehistoric cultivation, with one radiocarbon date to cal BC 1525-1410 (ID no118085-1 in the Askeladden database). At Tokheim in Odda, a test pit in a rock shelter produced debitage and a charcoal sample was dated to 1375-1050 cal BC (T-14312) (Valvik 2000). At Ullshelleren rock shelter, a charcoal sample was dated to 1030 ± 95 (Odner 1969:34).

6.5. Regional rock art patterns

So far I have established the distribution pattern of the rock art sites in the study area, but how does this pattern compare with the rest of West Norway? Are these patterns indicative of local or regional variation? Let us first look at the rock art in the rest of Hordaland. Hardanger and Etne have the two major concentrations of rock art in Hordaland. There is a small concentration at Voss, further inland in zone 3, including a site with Iron Age ships (i.e. A3/A4 type ships). Further north there are sites thinly spread, with some sites clustering in Os (Halhjem) and Fusa (Samnøy 1-2 and Vinnes 1-4), a site with A1 ships at Reigstad, Osterøy (Mandt Larsen 1980) and a site at Mostraumen, Modalen, dated to the Late Bronze Age/Pre-Roman Iron Age (Bergsvik 2006). All are located in zone 2. There are also some small cup mark sites in zone 1 in the archipelago in mid and north Hordaland (Mandt Larsen 1972). The

location of the figured sites does not differ from the pattern found in Hardanger and Etne: the sites are found in relation to the sea, such as at Reigstad and Samnøy. There are exceptions, the panels at Vinnes are not directly related to the fjord and are found far from the shore. Mostraumen is found on a vertical panel at the head of a narrow fjord. Thus there is a clear concentration to Hardanger and Etne, in particular in terms of cup marks.

In Sogn and Fjordane county a similar pattern to that in Hordaland is discerned, although the sites are more closely clustered than in Hordaland. There is also more Stone Age rock art here, at Ausevik, Vingen and Brandsøy (Hagen 1969; Mandt and Lødøen 2005). The Bronze Age rock art is concentrated in Askvoll municipality and constitutes the largest concentration of sites from this period (Mandt 1991; Wrigglesworth 2000, 2002). A second concentration is found at Henne in the Nordfjord area, where three panels with Late Bronze Age and Iron Age ships are located (Mandt 1991). Further out along the fjord a site is located at Krabbestig on an island, containing A1 ships, and on a small island on the outer coast, a site is located at Domba, with three A1 ships on a small vertical panel (*ibid*). At Kårstad there are ships and runes dated to the Iron Age (Mandt 1991, 2005). Cup marks are also found in large concentrations in Sogn and Fjordane; as in Hardanger, the sites are located in the mountains and in particular Luster municipality (Mandt 1991; Innselset 1995), in areas used for pasture or as summer farms. Ships and cup marks are the dominating motifs in Sogn and Fjordane. Rock art is also found on two slabs: the stone at Austrheim which was raised on an Iron Age barrow has a depiction of a ship, while the slab from Kyrkje-Eide (Mandt 1991) has several motifs including a ring motif, a concentric ring, a snake-like figure and several images that depict objects: a dagger, a sickle shaped object, a possible shafted axe and what could be interpreted as a shafthole axe seen from above. Some images could perhaps be interpreted as lurs or possibly stylised anthropomorphic figures similar to those in the Kivik grave in Sweden (Randsborg 1993). The slab is unique and cannot be compared to other slabs in Scandinavia, and it might have come from a grave.

There are less Bronze Age rock art sites in Møre and Romsdal, and cup marks and ships dominate. The sites are mainly located on islands along the outer coast, and only two sites are found further inland in fjords. The ships are generally late types (Roskard, Bogge 3) and are dated to the Late Bronze Age and Iron Age (Bakka 1987). The ships on the slabs from the Mjeltehaugen barrow were mentioned in chapter five, and are dated to the Early Bronze Age. A slab with two spirals was found in a grave (Mandt 1991).

In Rogaland we find the same type of motifs as in Hordaland, Sogn and Fjordane and Møre and Romsdal. A number of sites consist of images on slabs from barrows (Syvertsen 2002, 2003, 2005). The motifs range from ships, cup marks, and rings, to abstract line patterns. The slabs are often found in the fill, in some cases they are found in the burial chamber (ibid). The patterns on some slabs have been compared to patterns in European megaliths (Marstrander 1978). The open-air sites are dominated by cup marks and ship motifs. A large site is located at Åmøy island, close to the water (Fett and Fett 1941; Nordenborg Myhre 2004). The sites are generally located near the sea. Fluberget is an exceptional site as there was a lake or bog near it in the Bronze Age, and several objects have been found here, including a pair of bronze lurs.

This quick review of rock art in the rest of West Norway indicates that there are some regional differences in terms of location of rock art. As demonstrated in this chapter, the majority of rock art sites in Hordaland are concentrated to Hardanger and Etne, in zone 2 and 3. In Sogn and Fjordane county, the figurative sites are mainly concentrated to the outer coast, in zone 1, with cup mark sites concentrated in zone 3 and the exception is the site at Henne, in the Nordfjord. In Møre and Romsdal the few sites from the Bronze Age are located on the outer coast, although Bogge is located further inland along fjords, zones 1 and 2. With the exception of the sites in the mountain areas, the sites are found in the lowland, and generally near water. There is more variation in Rogaland, in particular due to the large amount of decorated stones from graves. It should be noted that most of the smaller stones with cup marks in the study area could originally have come from graves. The main point here is that although there are some differences in location in relation to landscape zones, there are more similarities than differences. Cup marks are found in the mountain areas, and figured sites are found in the lowland, near the shore. However, in Hordaland there is a clear concentration to the inner fjord areas, both in terms of figurative and cup mark sites.

6.6. Metal and stone: Spatial and chronological patterns

The archaeological record can help provide information on daily life and contribute to an understanding of the habitus. In this section the spatial and chronological distribution of bronze and stone objects will be discussed. The other archaeological categories discussed above are dated mainly based on their location, whereas the objects can be dated

independently of their context, so that the categories can be studied from different angles and complement each other. Although bronze objects in many ways define the Bronze Age, stone was still used as raw material for tools. Flint daggers, stone axes, arrowheads, scrapers and debitage found in contexts dated to the Bronze Age attest to this. However, even though it has been known that bronze could not have been used by everyone in the Bronze Age, lithic technology in this period has not been a focus for research to any extent (but see Prescott 1995; Högberg and Olausson 2005; Högberg 2009). There is a great potential here for future research. Because of this lack of focus, if not interest, much lithic material from the Bronze Age has not been identified, especially quartz tools. For this reason I have not conducted a detailed analysis of this material, as it would require a thesis of its own. Rather, I have considered flint daggers and stone axes as a starting point and as a contrast to the bronze artefacts. Other stone artefacts have been included if they have been found at the settlement sites included in this study.

As there is relatively little settlement evidence in the study area, objects such as flint daggers from period 1, and stone axes from period 4-6 could contribute to an understanding of activity areas as well as possible areas of concentrated settlement.

6.6.1. The distribution of bronze objects

The spatial and temporal distribution of bronzes in Hardanger and Sunnhordland indicates some interesting patterns. Only one object can be dated to period 1, the Fårdrup-type shafthole axe from Årekol (B 3389) in Hardanger, that is, period 1b (Vandkilde 1996; Aakvik 2000). The location is near the mouth of the Sørffjord.

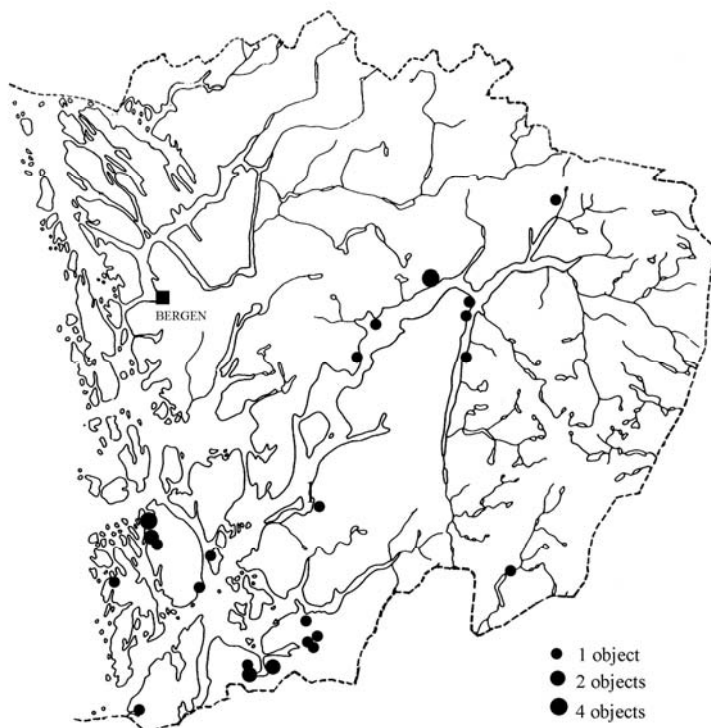


Figure 91 Metal objects in the study area, all periods and zones.

In period 2, however, there is a marked development and eight bronze objects can be dated to this period. Only one object is from the Hardangerfjord, a dagger found in the Nesjarøysi cairn at Utne, again in the inner parts of the fjord. The remaining seven objects are found at the outer coast and in zone 2: on the islands of Bømlo, Huglo and Fitjar, and on the mainland at Vindafjord (Ølen). Four shaft hole axes, two daggers and one sword are dated to this period. The axes were found in springs and are considered to be votive deposits (cf. chapter four above). The sword from Sørvoll was found in a peat bog and could very well be a votive deposit. The dagger from Etne is said to come from a cremation, possibly Garahaugen.

Period 3 sees another six bronze objects, two socketed axes, a dagger, two spearheads, and a sword. Again, only one object is from Hardanger: the axe was found in Odda. The remaining objects are a sword and spearhead from Fitjar, a spearhead from Vindafjord (Ølen) and a dagger from Etne. The axe is also said to have come from a cairn. The sword was found in the Rimsvarde cairn at Rimbareid (cf. chapter four).

A few objects can be dated to period 4, a razor from a burial at Hystad, Stord, a razor from the burial at Grindheim in Etne, a set of pin, tweezers, button and knife/razor from the burial at Vestbøstad in Fitjar, and a socketed axe from Vindafjord (Ølen) that was found under a boulder in a bog.

From period 5 there are three socketed axes from Hardanger, from Børve in Ullensvang, Kvamsøy in Kvam, and from Rosendal. The soapstone mould is from Eide in Granvin innermost in the Hardangerfjord, and indicates that metalwork was being carried out in the area by at least period 5. A gold bracelet was found near a hill in Sveio and although the context is unclear, could potentially have been a votive deposit.

Eight bronzes are known from period 6, from Hardanger and Etne. Five objects, three neck rings and two pins were found together under a boulder at Ålvik in Kvam. A Hallstatt type sword was found at Lekve in Ulvik. The sword was found in a crack in amongst rocks including a cup marked stone (Lekve 8), in the vicinity of a summer farm, 450 m.a.s.l (Fett 1956c) – a context that suggests a votive deposit (cf. chapter 4). The sword is undamaged and does not appear to have been used. A spearhead from Tjeldflot and a neck ring from Støle were found in Etne, both are votive deposits.

In addition to the mould from Eide, two soapstone moulds have been found in Hardanger, at Opedal in the Sørffjord and Ullensvang at the mouth of the Sørffjord. The first is an unfinished mould for a socketed axe, most likely from the Late Bronze Age. The mould from Ullensvang is partial, for a dagger or sword. Only the tip of the object has been preserved and it cannot be accurately identified, so a precise date is not possible. At any rate, the moulds indicate metalworking in this part of the Hardanger area in the Bronze Age.

In summary, then, the distribution of bronzes in the study area shows that the majority of objects are found in zone 1 and 2, and that these objects are concentrated to the islands, while only a few are found further inland in zone 2 and 3. The daggers from period 2 and 3 were found in burials. Axes, daggers, and swords were the only type of object from the Early Bronze Age, found in burials and votive contexts. Unfortunately, no bones have been preserved hence the burials cannot be identified as either feminine or masculine.

The number of metal objects increases markedly in the Late Bronze Age, 20 objects as opposed to 13 in the Early Bronze Age. The pattern described above for the Early Bronze Age does not change; the majority of objects are still found on the outer coast and in Etne, while there is an increase in objects in the Hardanger area, specifically in period 5-6. Now we also see the first indications of metalworking in the area, and based on the location of the soapstone moulds it would seem that this was spread throughout the Hardangerfjord area. However, no excavated sites have any signs of metalworking, i.e. crucibles, scrap metal, ovens and so on, apart from the fragment of a possible crucible at Kvitevoll.

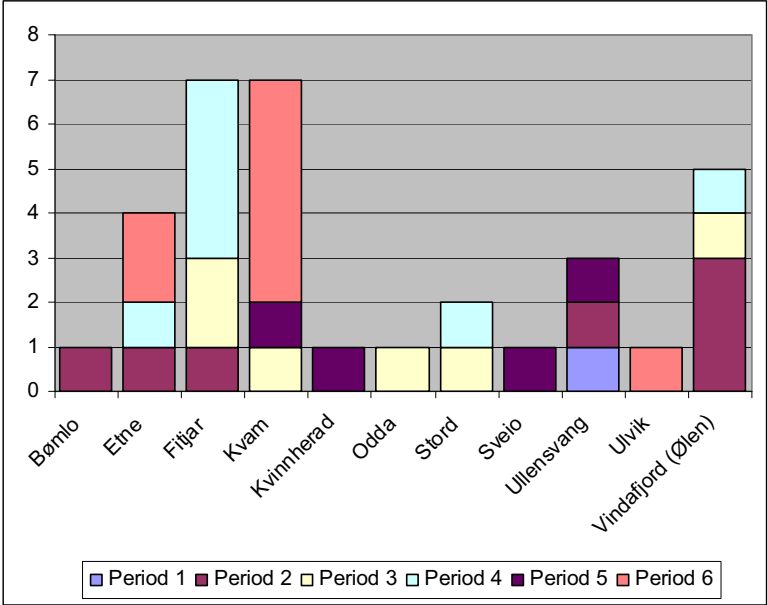


Figure 92 Spatial and chronological distribution of metal objects in the study area.

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
Zone 1		2	2	5	1	
Zone 2		4	2	2	2	2
Zone 3	1	1	1		2	6

Figure 93 Distribution of metal objects by period and landscape zone.

	Votive	Burial	No context
Period 1	1		
Period 2	5	2	
Period 3		2	4
Period 4	1	3	
Period 5			4
Period 6	8		
	15	7	8

Figure 94 Contexts in relation to period.

6.6.2. The distribution of flint daggers and stone axes

The flint daggers are found in large numbers in Scandinavia, and there are several types (Lomborg 1959). Lomborg's type VI is dated to the Early Bronze Age period 1 and 2 (Lomborg 1973:154). Thirteen type VI flint daggers have been recorded in Hardanger, four were found on the Hardangervidda plateau, while five daggers have been found in Etne. The daggers are concentrated to three municipalities, Eidfjord, Kvinnherad and Ullensvang in Hardanger, mainly in the inner parts of the fjord. Interestingly, this is also the case for the earlier flint daggers (types I-IV) from Hardanger, which are found in Eidfjord, Ullensvang, Granvin and Odda (Aksdal 1996). Three of the type VI daggers from Eidfjord were found at Hardangervidda (B 8093, B10763, and C16873), as was a dagger from Odda (B 6264). A dagger from Utne (B 8342) was found near the Nesjarøysi cairn which contained a period 2 bronze dagger. Moving further along the fjord system, there are six type VI daggers in Kvinnherad, including one dagger found at Nes where a period 3 bronze axe has been found. Three daggers come from three farms in the vicinity of Rosendal, while one dagger was found at Eide on Halsnøy island, and one was found at the mouth of the Åkrafjord. More interesting is that type VI daggers are found exclusively in the inner fjord areas in zone 2 and 3, while they have so far not been found or identified in zone 1. Seven type V daggers, dated to the end of the Late Neolithic, have been found in Bømlo, Etne, Granvin, Stord and Sveio, and two possible type V daggers have been found in Kvam and Kvinnherad. I mention these because their distribution is somewhat different to the type VI daggers.

The flint daggers were imported from Denmark and are generally considered to be prestige objects (Solberg 1994; Apel 2001). This could perhaps explain why there are few early bronze objects in Hardanger: there already were prestige objects in use in the area, and bronze was still a rare material. In addition, the daggers, type IV-VI, are clear imitations of early bronze daggers. These daggers were used, many have been used as strike-a-lights or have use wear. Thus the picture is not clear, these were prestige items, but were also in practical use.

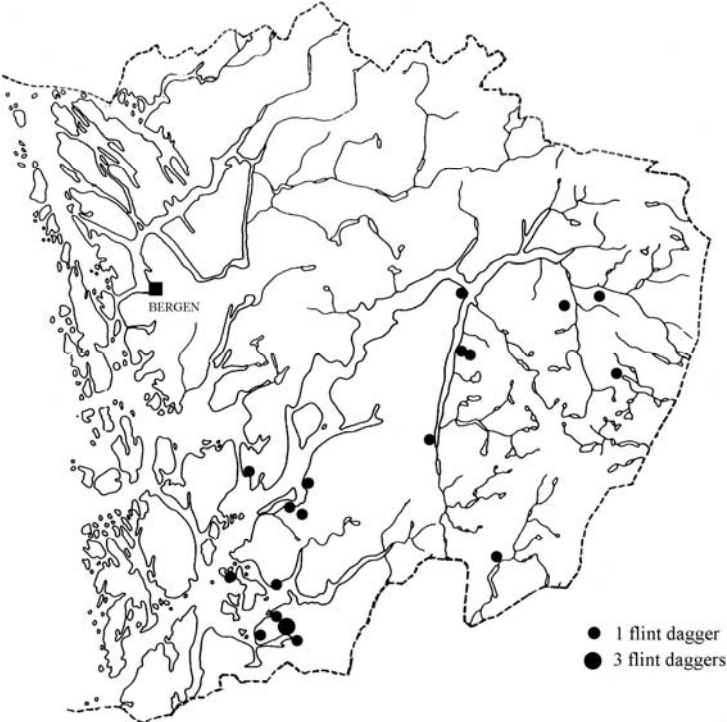


Figure 95 Spatial distribution of type VI daggers in the study area.

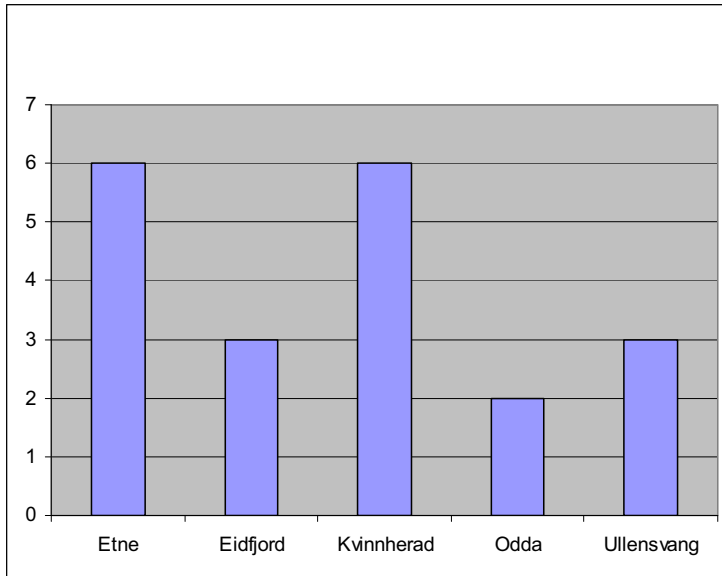


Figure 96 Quantitative distribution of type VI daggers in the study area.

A specific type of stone axe is found all over Norway, the so-called porphyry axes. Not all axes that fall into this category are made from rhomb porphyry; most axes in the study area are made from other types of stone. Rhomb porphyry is a volcanic rock that is only found in the Oslo area and transported along the coast by ice, and there are several quarries in eastern Norway (Marstrander 1983). Blocks are sometimes found on beaches along the coast in West Norway, and although the amounts are not great, this is relatively commonplace (Jansen pers.comm). The main characteristic of this rock is that rhombic crystals or phenocrysts are embedded in it, giving the rock a speckled appearance. The colour of the rock may vary from red to dark grey or brownish, the crystals are usually grey-white. The rock is hard; polishing the rock and making the facets and ridges on the axes would have required both time and workmanship. Although porphyry could at times be found on beaches on the islands along the outer coast, it would probably have to be acquired through trade or travel to the sources, which might have added to its attraction and perceived value. The colour, the specks and the hardness of the material might have been the qualities that made the axes sought after, and the rock could have carried specific meanings and connotations.

Two main groups of axes are placed in the category, shaft hole axes and grooved axes, with subdivisions into types within each group (Baudou 1960; Marstander 1983; Solberg 1988). These axes are polished and some types are faceted on the sides. Some axes are decorated

with incised grooves along the sides and some have defined ridges on the top. The shaft holes are small and the shaft must therefore have been thin, so that the shafted axes could not have been used for practical work as the shaft would simply break under the weight of the axe. In addition the axes do not exhibit any signs of use wear. Most importantly, the edges are blunt. For this reason the axes are generally interpreted as ceremonial axes, not intended for practical use (Glob 1938; Gjessing 1942:88; Marstrander 1983; Solberg 1988). They are dated to the Late Bronze Age, period 4, 5, and 6 and possibly the Pre-Roman Iron Age (Baudou 1960; Marstander 1983); the dates are based on a few finds at settlements and in graves in Denmark and Sweden, although most axes are stray finds. Their distribution is interesting in relation to the distribution of metal objects. In contrast to the metal objects, the stone axes are found in relatively great numbers in Hardanger, while eight axes have been found in Sunnhordland (figure 97, 98), with a clear concentration to zone 2 and 3, in particular the inner fjord area, where eight shafthole axes and three grooved axes have been found.

Another eight axes are known from Hordaland: four from Voss and four from northern Hordaland (Radøy and Meland). The distribution of axes in this category in Hordaland is remarkable. The axes are spread across all landscape zones, but the majority is found in zone 2 and 3, and there is a clear concentration in Hardanger, where 17 axes are found. This might indicate that these axes had a special significance in Hardanger compared to the rest of the study area. Some axes are broken at the shaft hole and this may have occurred during production. Other axes appear not to have been finished, for instance an axe from Granvin (B 7595), which has no shaft hole and was found under a boulder in a scree.

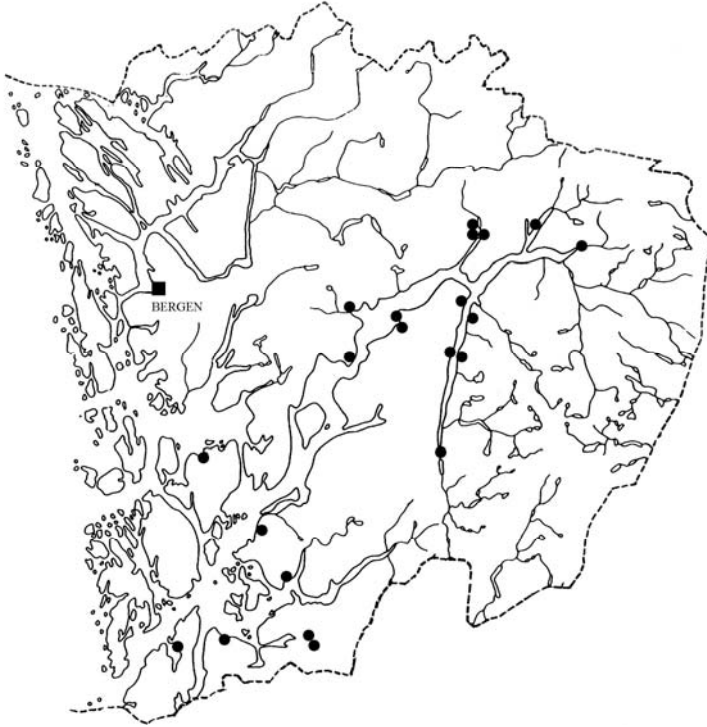


Figure 97 Spatial distribution of stone axes in the study area.

Municipality	Shafthole	Grooved
Eidfjord	1	
Etne	2	
Granvin	3	
Jondal	2	
Kvam	2	
Kvinnherad	2	1
Odda		1
Sveio	1	
Tysnes	1	
Ullensvang	2	2
Ulvik	1	
Vindafjord (Ølen)	1	
Total	18	4

Figure 98 Stone axes in the study area.

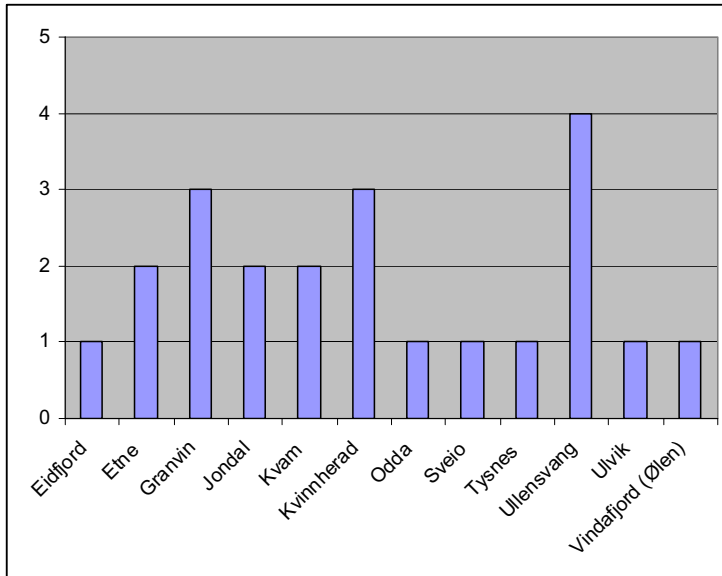


Figure 99 The quantitative distribution of stone axes dated to the Bronze Age.

Sverre Marstrander (1983) has carried out one of two relatively recent studies of the porphyry axes in Norway. However, it should be noted that several axes from Hordaland have not been included in his list of axes, some of which are included in Solberg's study of the grooved axes (1988). The reason is probably that this category has not always been recognised when the axes were catalogued. Marstrander compares the number of axes found in Norway with the number of axes in Sweden, Finland, and Denmark, and finds that 64.5 % of all porphyry axes in Scandinavia are found in Sweden. He then concludes that the use of such axes in Norway and Denmark must be caused by impulses from Sweden (1983:93). This is interesting in terms of the trade networks and routes that may have existed between east and west Norway, and could perhaps explain the concentration of axes in the inner Hardangerfjord – where it is conceivable that people would have had contact with eastern groups and maybe also groups from Sweden. The types of axes found in the study area are also present in Sweden (Baudou 1960), with the exception of two axes with faceted blades that are only found in Hardanger.

Glob argues that the axes are cultic because of their blunt edges (1938:57, 59) while Marstrander links the axes to chiefs and chiefdoms – the axes are seen as symbols of chiefly power and office, and the porphyry axes could have belonged to chiefs or sub-groups within chiefdoms (Marstrander 1983:102-104). If we were to accept that the axes were associated with a chief or sub-groups as postulated by Marstrander, there would be many chiefs in this

area compared to the rest of Hardanger and Sunnhordland – too many chiefs. I find it more likely that the axes were prestige objects that could have been acquired by anyone who was in a position to do so. According to Marstrander, no Norwegian axes have been found in burial contexts, and this is interpreted to mean that the axes were not personal belongings, but belonged to a group or institution as a whole (1983:99), which I have to disagree with. Two grooved axes have been found in plausible burial contexts in Sogn and Fjordane county (Solberg 1988:282; Wigglesworth 2000). An axe from Uge, Denmark, was found in a burial together with a bronze razor and a pair of tweezers (Glob 1938:48, 52). According to Per Fett, the axe from Opedal in Ullensvang (B 74) is said to have been found in a barrow along with a knife (Fett 1954f). This information cannot be corroborated, and the knife has not been preserved. The axes in the study area are mainly stray finds, one axe was found in what I would consider as a votive context under a stone. The rest were found during farm work, ploughing, etc, and in some cases there is no information whatsoever. In all likelihood, the axes are related to settlements, as they are found in areas that provide favourable condition for cultivation and animal husbandry. However, the burial practices in the Bronze Age could have been more varied than is recognised today, for instance some graves might not have been marked, so that no conclusions can be drawn.

6.7. Spatial and chronological patterns

The archaeological material clearly indicates that all parts of the landscape were used in the Bronze Age. The analysis shows that all areas of the landscape were used for various activities. The archaeological categories are spread across all zones, but some patterns are evident: Graves are found on or near the shore; rock art sites are found either on the shore or in higher locations in the mountains; settlement sites are drawn in from the shore. This is a pattern that we see throughout the study area. Cup marks are found in locations that could have been used for pasture in the Bronze Age. The stone and bronze objects considered here are spread throughout the study area, but some spatial patterns can be discerned: early bronze artefacts are generally found on the coast, while more artefacts turn up further inland in the course of the Late Bronze Age.

The analysis indicates that the population was spread throughout the study area, including the inner side fjords of the Hardangerfjord. However, there are some points worth considering. In the Hardangerfjord, the site at Flatebø was located high up in the landscape, while the site at

Aga had a low location. This indicates that the settlements were laid out according to local topography. In central Etne the situation is somewhat different, the graves and the majority of objects were found on the terraces in the flat areas between the fjord and the Storavatnet lake, while there is some rock art here. There was also some evidence of Early Bronze Age or Late Neolithic ploughing and agriculture on the Støle terrace, not far from the rock art site on the edge of the terrace and underneath the Garahaugen barrow. The majority of rock art sites are found in the Stordalen area, but no graves and few objects.

I have also reviewed and mapped the settlement sites that have Bronze Age dates in the study area. The data set is too small to generalise, but some conclusions can be drawn. Bronze Age settlements are found across all zones, and in different topography. Most sites are located in good agricultural areas. Radiocarbon dates indicate that there was activity at several sites from the Neolithic throughout the Bronze Age and into the Iron Age, e.g. Aga, Flatebø, Kvitevoll, and Jensajordet. The sites were used more or less continually for several thousand years. These sites are located in places that are populated and farmed today, so that possible Bronze Age houses could be buried beneath modern buildings and roads.

The sites discussed above show an interesting variability in location in relation to topography. At Flatebø, the house and fields were located at 70 m.a.s.l. in sloping terrain, while the other sites were in more open and flat terrain, generally about 20-30 m.a.s.l. Settlements were established wherever it was possible to clear the land and find good pasture. More systematic surveys and excavation further up on the hillsides both in Etne and in Hardanger are likely to reveal more Bronze Age settlements. Even today, many farms are located high up around 100 m.a.s.l. in the Sør fjorden area in Hardanger.

In the Early Bronze Age, bronze objects are clustered in zone 1 and 2, i.e. the islands Stord, Bømlo, Huglo, as well as some finds in Vindafjord (Ølen) and Etne, while there are few objects in zone 3. This pattern should not be interpreted as a sign of limited activity in the inner parts of the Hardanger fjord system. Elsewhere in West Norway, early bronzes from period 1-3 are found in the inner fjord and mountain areas, for instance the bracelet and two flanged axes at Veim in Aurdal, Sogn and Fjordane county, and a period 2 spearhead from Voss in northern Hordaland, relatively close to Hardanger as the crow flies. As noted earlier, settlement sites from the Bronze Age are emerging, as the site at Aga, where there are

indications of cultivation in the Late Neolithic and the Early Bronze Age (Berge 2008), and Flatebø (Slinning 2007). The flint daggers are not numerous, but their distribution does not differ much from the distribution of bronzes. They cluster in the inner fjord area and on Hardangervidda, and there is also a small concentration in Kvinnherad and Etne municipalities.

This tendency continues into the Late Bronze Age, but changes in period 5 and 6. There are more finds in the inner fjord areas compared to the Early Bronze Age, both in terms of bronze and stone objects. Moreover, soapstone moulds indicate metalworking in this period. Unfortunately, no workshops have been discovered so far. The number of metal objects increases and the objects are now spread evenly between the coast and the inner fjord areas. In some cases, several objects are found together in a votive deposit e.g. at Ålvik, and in the grave at Vestbøstad (cf. chapter four). Stone axes are turning up in the entire study area, but with a concentration to the inner fjord areas.

The majority of securely dated graves in the study area are dated to the Late Bronze Age. Using older cairns for new burials might have been a widespread practice as indicated by multiple burial chambers in some excavated cairns, e.g. the cairn at Eide in Kvam (Shetelig 1910; cf. chapter four and appendix B), so that the number of existing cairns does not necessarily reflect the actual activity – there could have been more burials than cairns. The rock art sites increase in number as well, although as demonstrated in chapter five, the majority of figurative sites at least had been established in the Early Bronze Age. However, in the Late Bronze Age the activity at these sites increased, new images were made and some new sites were established.

The graves that can be securely dated to the Bronze Age through finds, radiocarbon dates, location, and construction details are not many, and they are concentrated to zones 1 and 2, while one grave is known in zone 3. This pattern across the zones has probably more to do with the fact that more graves have been excavated in zone 1 and 2, in particular in Fitjar, Stord and Etne, than in the inner fjord areas. However, as we have seen, there are several cairns that could possibly be dated to the Bronze Age based on their location on promontories and islands. Many cairns have been disturbed and finds may not have been recognised or reported to antiquarian authorities.

The graves are related to routes of communication, especially by sea. A traditional interpretation of their location is that the cairns were used as navigational markers (e.g. Hagen 1983). They are accessible from land, and are in principle accessible from the sea as well. The location on promontories, at the entrance to sounds, and at the mouths of fjords indicates that the graves were meant to be seen. Certainly, the largest cairns could have a dominant effect in the landscape, especially when they are found on the edge of a sheer drop. However, smaller and lower cairns might not have been as visible. The stones in the cairn could easily blend into the surroundings, and thus they would not be visible until one got quite close to land. In addition, many are located high up on promontories, which would obscure the visibility from the sea, even when taking the shoreline displacement into account. On the other hand, there are examples of cairns that appear to have been built at the water's edge, such as at Hystad. Still, these graves would also have blended into the surroundings from a distance. The graves are thus mainly related to the sea, and the places could perhaps have some local or personal connection.

Several rock art sites were established in the Early Bronze Age in zone 2 and 3. Early figurative sites are Utbjoa 4, Vangdal 1, Linga 1, Berge 1, Hammarhaug 1, while cup marked sites and sites with ring motifs were probably also established at this time, e.g. Støle 1, and Vinje 1-3, possibly also many of the cup mark sites in Hardanger. The Nesjarøysi cairn was built sometime in period 2, and the cairn at Eide was built in the Early Bronze Age. There can be no doubt that the inner fjord areas, mountain plateaus, and mountain passes were actively used in the Early Bronze Age. Future archaeological excavations will hopefully provide more information.

The majority of rock art sites are found in zone 2 and 3, while only a small handful are found in zone 1. However, it is interesting that the few sites in this zone are slabs or stones that have cup marks or other unidentifiable images, one of which comes from a grave at Skålevik in Fitjar. The other slabs may well have come from graves as well, as slabs with rock art are often found in graves (Syvertsen 2002, 2003, 2005). In zone 2 there are both figurative images and cup mark sites, but the figurative sites dominate. The situation is the reverse in zone 3, where cup marks dominate. The figurative sites in zone 1 and 2 are found in locations close to water, either the fjord or lakes, and they are related to routes of communication, mainly by sea. The view from the sites is good, usually taking in a large expanse of the surrounding area, and some are also visible from the surrounding area.

The landscape setting differs somewhat between the two main areas for rock art, Etne and Hardanger. In Hardanger, the majority of sites in zone 2, both figurative and cup marks, are located along the fjord, while that is the case with only one site in Etne. Here, the sites are located on the terraces and on hillsides, very much like the situation in Hardanger in zone 3, where the cup mark sites are found on small terraces up towards the mountain pastures, except that the sites in Hardanger are mainly found even higher up and away from the likely settlement areas. The figurative sites in Hardanger are found in the shore zone, and several sites must have been at the water's edge when they were made, e.g. Vangdal, Hammarhaug, Linga, Berge, and in Etne and Ølen this was also the case for Utbjoa 1-2 and Fjøsna.

From the above it is clear that we can infer some patterns in terms of choice of motifs and location in the landscape. Some motifs are a lowland phenomenon across all zones; this applies to the ship, the anthropomorphic and zoomorphic figures, and some geometric motifs such as rings. In the mountain zone, cup marks dominate. In this zone there is one exception: the Ullshelleren rock shelter where there are ships, footprints, animals, and humans (Onder 1969, Mandt Larsen 1972). At Børve, a panel consisting solely of foot prints is located in the middle of a path leading up to a summer farm, approx. 200 m.a.s.l. Foot prints are also found on other sites in the mountains – in Ullensvang there is a site at Dravledalsvatnet lake with cup marks and foot prints (Reisæter 2), and there are foot prints at Hauso 1 and 2.

I also considered accessibility and inaccessibility, and found that the figurative sites in zone 1 and 2 are located in accessible places, especially for anyone coming by boat. This is particularly the case for Berge and Hammarhaug in Hardanger, where the rock might have appeared to rise out of the sea. For this reason I consider these sites to be public and collective, i.e. they are available to a large group of people and would presumably have been available to strangers as well as locals. It should be noted that what is considered inaccessible today might not have been so for people in the Bronze Age. It is interesting to note that there are several sites on vertical rock faces in zone 2, possibly indicating a pattern of location. Whether the location also reflects meaning is a question I will return to in chapter 7 below. In zone 1, the slabs and stones are not always found in context, but it would seem that rock art played a different role here, with the exception of Vestbøstad, possibly being used in graves and burial rituals. Thus the distribution of rock art indicates some regional and local patterns within the study area.

6.8. Summary

What I have shown in this chapter is that there are patterns in the archaeological material, in particular the rock art, which can be used to formulate interpretations about the world in which people lived in the Bronze Age, and how they related to their world.

Rock art sites are found in two main locations: they are either shore bound/close to the shore or situated in the mountains. The shore bound sites have an extensive view, but for some exceptions, and are also easily visible from a distance. The sites in the mountain zone have variable visibility; they are found on a variety of rocks, from large boulders to flat stones. The chronological discussion indicated that the majority of figurative sites were established in the Early Bronze Age, towards the middle of the Bronze Age, in period 2-3. This was the case both in Hardanger and in Etne. Activity then continued into the Late Bronze Age, with a peak around period 4-5. At some sites, activity went on into the Pre-Roman Iron Age. The spatial and temporal distribution of rock art is thus a good indication of how the landscape was organised and used in the Bronze Age.

The distribution of cairns displayed spatial patterning. Cairns from the Bronze Age are consistently situated on high vantage points: on islands, headlands, promontories, at the mouth of bays or at the entrance to or along sounds. Extensive views from the cairns are the norm, and the places are usually visible from a long distance – but the monument is not visible until one gets close. Some of the cairns that have been excavated have multiple burials, i.e. a primary chamber and smaller secondary chambers or cists, indicating a reuse of the monuments.

Votive deposits are found in two contexts: stone-related (“dry”) and water-related (“wet”) contexts. There is also a pattern to the type of object that was found in deposits and in what type of context: Early Bronze Age decorated shaft hole axes were found in wet contexts, while an undecorated Fårdrup type axe was found in a dry context. The dry contexts are mostly in higher areas, in the middle or mountain zones, in both the Early and Late Bronze Age. This indicates a continuity of place – not in the sense of repeat deposits in one place, but rather that the same type of place and location are chosen.

The settlements display some signs of continuity. At Skåla in Kvinnherad houses from several periods were found grouped together, so that the location had Neolithic, Bronze Age and Iron Age phases, all in the same place. At Kvitevoll in Kvinnherad there were signs of activity from the Neolithic through to the Middle Ages, with a peak in the Bronze Age and Pre-Roman Iron Age. At Aga in Ullensvang there were indications of activity in the Late Neolithic, Bronze Age and Iron Age.

The analysis also indicates some interesting spatial patterns. Settlement sites are not found near rock art sites, with the exception of the rock shelters Ullshelleren and the shelters at Tokheim. The rock shelter at Sævarhagen in Herand is also relatively close to the rock art at Bakke. Graves are found in the same area as settlement sites, for instance at Aga, where there are cairns at the nearby Aganeset promontory. There is also a connection between rock art and graves, as some slabs and stones with cup marks or other images might have come from graves. The bronze and stone objects have a similar distribution to the cairns and rock art. The stone axes are found mainly in the inner fjord area. However, all categories are not found together, on the same farm or in the same area. This suggests that there is a clear pattern in localisation of settlements, graves and rock art, and that there is a degree of organisation of the landscape.

Chapter Seven: The social dimension of rock art

People are not indifferent to their world, to what they see, feel and experience. New encounters, objects, ideas, and so on must be related to something that is already known, familiarising them. In chapter six I demonstrated that there are certain patterns in the spatial distribution of the archaeological material. These patterns are indicative of how people in the study area engaged with the world in which they lived. In this chapter, I will consider these patterns and relate them to the social sphere.

Rock art sites and motifs display a considerable variation, as I have demonstrated in chapters four, five and six. Location and the type of motifs that are found in various locations do differ, so interpretations of rock art and its location must also be differentiated. This means that rock art cannot be seen as one heterogeneous group of archaeological material. Interpretations of rock art often revolve around fertility and a fertility cult, and more recently the ship as sun symbol (cf. Kaul 1998, 2004). This chapter will revolve around three main themes: an alternative cosmology for West Norway, social memory, and rock art and the social sphere.

I will start by defining a cosmological framework before exploring social memory, and finally, relate rock art to the social sphere, where cosmology, everyday life and world-view come together. Aspirations and expectations, ideas and what is considered reasonable and unreasonable are conditioned by the habitus. Likewise, the habitus influences what actions are taken and how social agents perform those actions. Hence, how people act, think and feel are structured by the habitus, which is a socialised way of life and behaviour. Consequently, it is of interest to study patterns which can suggest local differences in ways of behaving and acting, and engaging with the world.

7.1. Another world: cosmology

In a world where two main landscape elements – mountains and sea – dominated, these elements must have been significant on more than one level. The sea and the mountains were obviously crucial in terms of resources. But these elements might influence routine actions and shape personal and local identity as well as world-view; how they inform a sense of how

the world works, and what beliefs and ideas were held by the people who lived in these landscapes are thus of interest. Meaning is produced in a dialectic relationship between people and the landscape, hence it cannot be clearly said whether people attached meaning to landscape features or whether those features gave meaning to people. The spatial patterns do indicate that some parts of the landscape were meaningful and important to Bronze Age people in the study area.

As discussed in chapter two, rock art interpretation in Norway and Scandinavia in general has centred on an agrarian framework, drawing heavily on Oscar Almgren's theories (1927) that Bronze Age religion consisted of a fertility cult and sun worship. This idea has become popular again, with the model presented by Flemming Kaul (1998, 2004), where it is argued that the ship is associated with the sun's journey across the sky, and that the Nordic religion was influenced by religious beliefs in Europe and the Mediterranean. Above I have demonstrated that the majority of rock art is found in what we might call maritime locations, close to the sea (chapter six). The maritime aspect of rock art has generally not been discussed; rock art is rather interpreted within an agrarian fertility framework (cf. chapter two). Hence ship images are often interpreted as cult ships used by an agrarian population (Almgren 1927:145), rather than as depictions of actual ships. Johan Ling and Lise Nordenborg Myhre are two exceptions. Ling (2008) points out that archaeological interpretation of rock art has been made within a terrestrial paradigm. This is certainly the case in Sweden, where the sites are located away from water as a result of shoreline displacement. In west Norway, the sites more or less have their original location relative to the shore line, as the displacement has been comparatively minimal in this region. However, even though the maritime location has not escaped previous researchers (e.g. Mandt Larsen 1972; Mandt 1978), they have nevertheless focused upon Almgren's theory of a religion centred on the sun and fertility from an agrarian perspective (Marstrander 1963; Mandt Larsen 1972): Rock art was made by an agrarian population that depended on fertility for both animals and crops, so the sun was essential for survival. Hence the many rings and cup marks have been interpreted as depictions of the sun, and in accordance with Kaul's model, the ship is linked to the sun's movement across the sky and daily rebirth.

Kaul's model has proven popular because it is a coherent and all-encompassing system that includes both decoration on objects and rock art to produce a complete view of Bronze Age iconography. The assumption is that all rock art sites from the Bronze Age depict elements

that are identical throughout Scandinavia, and consequently an identical religion, the Scandinavian Bronze Age religion. However, the iconography is not the same throughout Scandinavia, and the range of rock art motifs in West Norway is less varied and less numerous than the range of motifs in for instance Bohuslän, Sweden. Even though the ship is the dominating motif, it might not have had the same connotations in Etne as it did in Sweden. Moreover, there are ship types that are only found in West Norway and that could possibly relate to local ideas. While I do think that Kaul's model is both interesting and thought-provoking, it might not be as well suited to interpret rock art in west Norway, in particular the sites in the study area. People who lived in Scandinavia must have had beliefs and ideas about the sun, considering the long dark winters with very little daylight. In all likelihood, they had ideas and beliefs about celestial bodies and other phenomena that were observed. However, I do not accept that religion, cosmology, superstitions, and beliefs were concentrated on Indo-European myths on the sun, horses, and chariots alone.

My main objection is that Kaul's cosmological model is based on the decoration on bronze objects, in particular razors found in Danish burials and that have no parallels in the archaeological material in West Norway. There are certainly decorated objects in West Norway, but there are no ship depictions. The bronze objects that exist, decorated or unadorned, can be related to members of a local elite, but that does not mean that their religious views were identical to those of the elite in Denmark. As commented earlier, the objects that Kaul bases his model on were used by presumably elite men, possibly warriors, and the ideas depicted could potentially be related to a specific sphere within Danish Bronze Age society. If an elite mythology did exist, what did people who were not on the upper echelons of society believe in? Decorated objects do not automatically equal a fully-fledged cosmological and mythological framework with sun-horses and sun-ships.

There are some indications that an Indo-European mythology based on the sun, horses, the sun being drawn in a chariot and so on did exist in West Norway. At the rock art site Unneset in Sogn and Fjordane county a chariot drawn by two horses is depicted (Prescott and Walderhaug 1995; Wrigglesworth 2000, 2002, 2005), and at Haustveit in Ullensvang municipality, a ship appears to be drawn by a horse-like figure (cf. Appendix D, plate 19). There are indications that people in West Norway knew of religious ideas in other parts of Scandinavia, and incorporated them. At Haustveit, some ring motifs could well be depictions of objects that were used in ceremonies, e.g. bronze discs, examples of which have been

found in Denmark and which are commonly interpreted as representations of the sun (Kaul 1998). However, this does not mean that all rock art images can be related to or depict this mythology, rather, I will argue that rock art interpretation should be differentiated, in the sense that rock art images could have had several “layers” of meaning. A ship image could refer to a number of meanings, and different myths or cosmological beliefs could have been depicted on different occasions. Likewise, the meaning of the images could have changed radically while the type of image remained static. Hence, a ship image does not necessarily equate a sun-ship mythology, although that might have been one of its meanings, perhaps within an elite mythology. Ships and other symbols might have had different meanings in different areas, based on local practices and customs.

In this section, I want to present an alternative to Almgren and Kaul’s sun-ship model, by exploring the location of rock art, hoards, and cairns in the study area. Location is not random, and for that reason meaning might be elucidated from the places where rock art is found. Two main elements are emphasised here, the sea/water and stone. Cosmology (from Greek; *kosmos*: universe and *logia*: study) can be defined as a theory on the origin of the universe. Cosmology and religious beliefs are ways of making sense of the world, to explain reality and to justify or legitimise the world. In archaeological terms, the monuments that we study can be said to embody ideas about the world (Bradley 1993:69). Rituals are performative. They narrate mythological events, but they also recreate them. In other words, rituals embody and recreate ideas about the world. Defining ritual is not straightforward, because rituals are not necessarily religious in character, or connected to beliefs (Bell 1992). Rituals are habitual actions, and for the purposes of this study, rituals are related to religious and cosmological beliefs. Rituals are used to accomplish something, for instance to make supernatural beings comply with one’s wishes. In short, rituals are ways of manipulating supernatural powers, to accomplish or to avoid something. It should also be pointed out that rituals are invented at some point, so that they conform to what is considered as appropriate behaviour and beliefs (cf. Connerton 1989:51). Thus rituals give meaning to the lives of those who perform them, so rituals are significant in terms of everyday life as well.

7.1.1. The sea and the ship in cosmology and mythology

The fact that the ship is the dominating rock art motif tells us that it was an important symbol and probably a significant part of life. The ship would have been a necessity in West Norway, where travel by sea has been the quickest way to get around, historically. Boats were the main means of transport and movement, although mountain passes were used as well. Even at present there are communities that do not have roads and are completely dependent on boats. So the coastal population would have been experienced mariners, and would most likely have been familiar with long expanses of coastline. They would have named places such as islands, skerries, shoals, sounds and so on. The sea would have played a major role in people's lives in West Norway, where the physical landscape – or seascape – is dominated by fjords, islands, and skerries. Hence it is conceivable that the sea also played a major role in both cosmology and mythology. In this perspective it is interesting that figurative rock art is found in the intertidal zone in zones 2 and 3 in the study area. Ships are not only linked to rock art: a small number of inhumation burials in Sweden contain the remains of boats, dated to the Late Neolithic/Early Bronze Age. The boats appear to have been used as coffins, and there could certainly be both pragmatic and symbolic reasons for this. Stone settings shaped like ships are well known in Scandinavia, and are dated as early as the Early Bronze Age, although they are prevalent in the Late Bronze Age (Artelius 1996; Berntsson 2005:129-131). In some cases stone settings shaped like ships are found inside barrows, as is the case in the Knaghaug barrow in Rogaland county in Southwest Norway (Nordenborg Myhre 1998). Rock art is in some cases associated with burials, both outside and inside the graves (Bradley 1997a; Wrigglesworth 2000, 2002), and there are a number of mounds containing slabs with rock art in Rogaland county (Syvertsen 2002, 2003, 2005). Some burials are also located on or close to the shore (Wrigglesworth 2000, 2002). The sea is often associated with death and the underworld (Helskog 1999; Bradley 2000; Needham 2009) as opposed to land. This could be one reason why the ship is such an important symbol in the Bronze Age – it is built on land but belongs at sea, and could have come to symbolise transition and liminality.

In the modern age, the sea is considered as a blank surface, as areas that can be traversed by anyone. It is perhaps for this reason that the sea has been somewhat overlooked. Water is alive; it usually moves constantly whether it is a river, a brook or tidal waves, making sounds, reflecting the light. It also has an immense power – water can destroy through flooding and storms. Strong currents can kill. On the other hand, the sea is teeming with life and a source

of food, fish, seal, whale, mussels, and waterfowl. In addition the sea is an important communication route. The sea can be unstable, there are storms, currents, tidal changes, and there were perhaps observable changes in the shoreline. The situation at sea can change almost in an instant, from calm waters to raging storms. Hence it is possible and plausible that the sea was considered to be alive, or filled with spirits. These spirits needed to be placated so that sea journeys could be undertaken safely. If the sea was thought to be imbued with spirits, then it might also have been part of a broader cosmological and mythological framework. The sea is not the only body of water that seems to have been important in the Bronze Age. Hoards and some rock art panels are found in relation to springs and wetlands, e.g. the axes at Lunda and Rimbareid, the neck ring at Støle, and the concentric ring image at Aga 1 (chapter four, six and appendix A-C).

There could have been various types of knowledge related to the spiritual significance of the sea. A good ethnographic example is that of the Saltwater Peoples in northeast Australia (McNiven 2003). Of course, the ethnography of Australia cannot be transferred directly to the Bronze Age of West Norway; however, it is a good example of how a seascape can be given meaning. According to McNiven, seascapes are defined by cosmologies that affect the use and perception of the sea (2003:332). Some features e.g. islands, sandbanks, tides, reefs and so on are often associated with mythical beings that are thought to have created these features in the Dreamtime, and can be perceived as visual manifestations of the Ancestral Beings (ibid:332-333). Importantly, the sea is not an “empty” space, but is defined cosmologically and socially. As is the case on land, the sea can be divided into tenures, areas to which certain groups or clans have rights. An interesting aspect of the ethnographic evidence from Australia is that the seascape or spiritscape is ritually managed, so as to control the powers within them, and that these rituals take place in maritime contexts, usually in the inter-tidal zone (ibid: 336), where the sea meets land. These ritual sites are inundated daily by the tide. This is an interesting perspective in terms of the available archaeological material in the study area, where rock art and in some cases graves are located on the shore. Any remains of activities here would thus have been washed away by the tide, as is also indicated by the remains of the hearths in front of the panel at Berge (cf. chapter six). Thus there is a contrast between the everlasting images and the transience of the intertidal zone. McNiven suggests four types of ritual action related to the shore or seascapes: increase or maintenance rites, hunting magic, controlling the elements, and mortuary rituals (2003:344). A similar situation is possible in the study area in the Bronze Age.

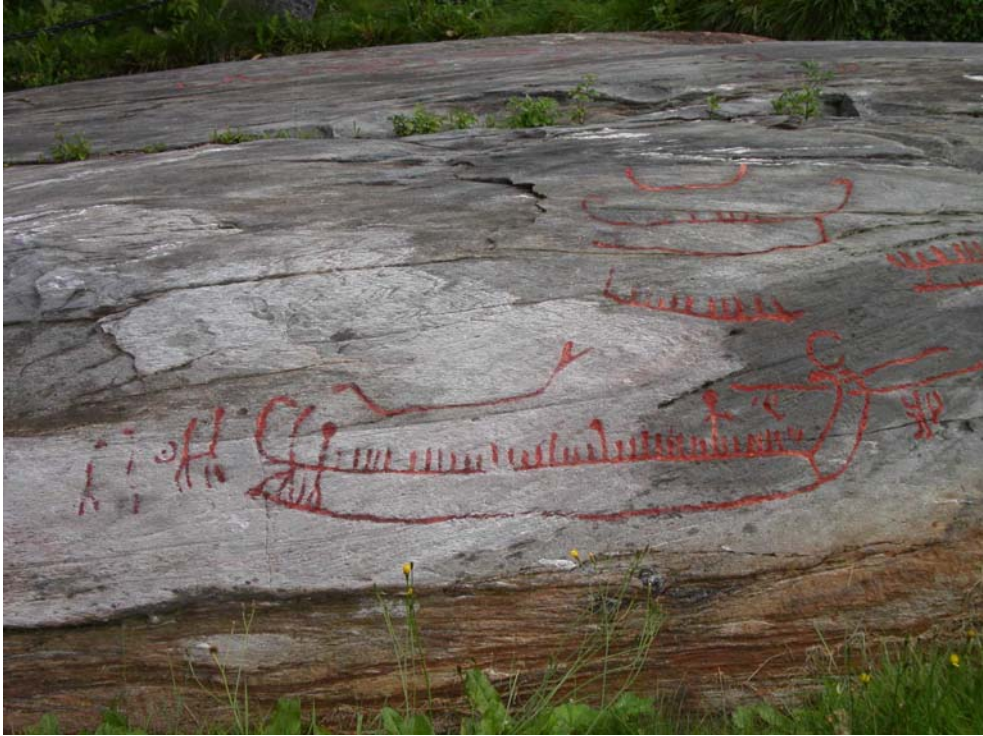


Figure 100 Scene from Bakke 1, Jondal. A ship with crew, surrounded by human figures. Photo: M. Wrigglesworth.

Thus I will argue that Bronze Age figurative rock art in West Norway is based on a maritime cosmology and maritime way of life. On the other hand, in some cases ship images are found far from the sea, as is the case at Ullshelleren rock shelter (cf. chapter five and six). There are few such cases, most ship images are found either on the shore or within view of the shore. In the study area, only three cases are known, at Ullshelleren, at Vik and at Børve. In Etne, the figured panels are found far from the shore, but generally near water, Lake Storavatnet. Fjøsna is the only site on the shore. There could be many reasons for this, and the ship as symbol could include many layers of meaning related both to cosmological beliefs and to maritime interaction. The ship images found in the rock shelter at Vik and in Ullshelleren could perhaps represent cosmological ideas. For instance, the ship could have symbolised real ships as well as cosmological ships; it could have symbolised narratives about the creation of the world, real or mythological travels, as well as cosmological ideas about the after-life, ancestors, and death. The fact that ships are found in such locations would indicate that they were part of an overall structure, that the ship as symbol represented something that was not

always restricted to the sea or the shore, or that the shore was so important that symbols related to it were made in rock shelters far from the sea.

7.1.2. Cairns and the sea

In chapter six, we saw that cairns are located in places that can be associated with water, usually near the shore about 10-25 m.a.s.l. and sometimes even lower, around 5-10 metres above the present shoreline. When we correlate this information with the available shoreline data, it is clear that some cairns were built on the shore, and might even have been inundated at high tide (cf. Westerdahl 2000:12-13; Nordenborg Myhre 2004) or at least sprayed by the sea. This is likely for some of the cairns at Hystad and the Nesjarøysi cairn. Both rock art and cairns have a close topographical connection to the sea, and a reasonable interpretation is that the monuments were given this location because the sea was significant, i.e. that water and the sea were central elements in what happened at the sites.

As indicated in chapter four and six, various species of shell have been found in cairns. Three species have been identified: *patella vulgata*, *mytilus edulis* and *littorina littorea*. What is interesting is that the habitat of these species is the intertidal zone. They stick to the rock and are not flushed out to sea by the tide. At Hystad, the shells were put on top of the charcoal and cremated bones in the urn (Bakka 1958a, 1972; see figure 101). In other cases, the shells are found inside and outside the cist, spread, rather than concentrated. This is a marine element that emphasises the close spatial relationship with the sea, as shells and cairns are located in the shore zone. This might have been a widespread practice, as shells have been found in Early Bronze Age mounds in Rogaland county (Larsen 1996), and in Bronze Age mounds in central Norway (Rygh 1906). One must be careful not to generalise based on only a handful of burials – we do not know how widespread this practice might have been. As few Bronze Age cairns have been excavated professionally, it is hard to see this as more than a local phenomenon. Preservation conditions must also be taken into account; shells might have been deposited in a grave, but have not survived. In addition, early excavations were more concerned with finding metal objects and if shells were encountered they might not even have been mentioned in the excavation report. Some shells could have ended up in the cairns by accident, for instance if sand or gravel were collected on the beach. Other shells were clearly put in the grave on purpose.

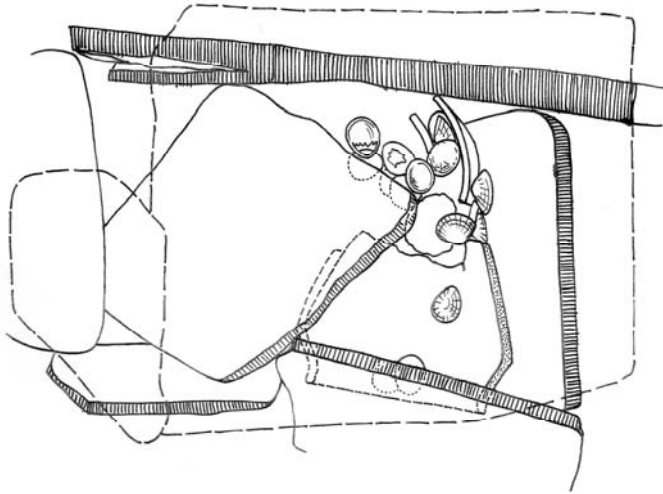


Figure 101 Cist 3 in cairn at Hystad. Drawing by Egil Bakka 1958, Bergen museum archives.

Shells are not the only marine element encountered in cairns in the study area. In some cases the bottom of the cist was covered by sand or small round pebbles that must have been collected along the shore. This is the case at Hommandeneset at Huglo and at Eide, Kvam. The Nesjarøysi at Utne was built on the original shingle beach, according to the report (Bøe 1930), and was located about 10 m.a.s.l. The shore line diagrams indicate that the shore line in the Early Bronze Age in this area would have been about 8-10 metres higher than today. This again would indicate that this cairn was built on the shore, no more than a few metres above the contemporary shore line. Arguably, this is no more than an indication as the shore line data for the Bronze Age are tentative (cf. chapter four). However, as indicated in chapter four and six, many cairns from the Bronze Age are found in locations that vary between five and 20 metres above the present shore line. This is a strong indication that the shore was significant. The location of the cairns has traditionally been interpreted in terms of navigation (e.g. Hagen 1983); the cairns were built on promontories and other prominent locations close to the shore so that they could function as navigational markers. Marine sand and rounded stones and pebbles from the beach are elements that appear to have been widespread: Rygh mentions that marine sand or gravel were found in several cists at Todnes in Central Norway (1906), and this is also the case in Rogaland (Larsen 1996; Nordenborg Myhre 2004) and at Lista in South Norway (Nordenborg Myhre 2004), where a number of Early Bronze Age burials contained sand, shells or round stones. Some Bronze Age burials in Sweden contained sand (Bertsson 2005:139), while shells have been recorded in burials in Schleswig (ibid:

138), used as a foundation for the burial chamber. Interestingly, seaweed has been found in several graves from both the Early and the Late Bronze Age in Denmark and South Sweden (Berntsson 2005:136-137), in some cases it appears to have been used as a construction material in the barrow, in other cases the seaweed was found around or covering the coffin. There could be practical reasons for using shells and seaweed, to support or isolate the coffin. On the other hand, other materials might have been easier to use, and thus seaweed and shells might have had some other significance. Seaweed has not been mentioned in the excavation reports for graves in the study area.

Against this background I will suggest that marine elements were a regular feature in burials throughout the Bronze Age in West Norway. The fact that we do not have more instances of this practice has probably to do with the lack of professional excavations in the past and the fact that few cairns are excavated in the present. Furthermore, both the presence of marine elements and the location on or near the shore indicate that the sea and the shore were significant, and thus that a cosmology where the sea and the shore played a major role did exist in Bronze Age West Norway. This maritime cosmology is possibly part of a larger and general Scandinavian ideology/cosmology, if we consider Ling's results in Bohuslän, Sweden. On the other hand, this could well be a coastal phenomenon. Moreover, the practice could be related to a regional, or local, identity that is based on beliefs and ideas about the sea.

7.1.3. The cosmological significance of stone

Although I have suggested that the sea was cosmologically significant in West Norway in the Bronze Age, this does not necessarily mean that all cosmological ideas were related to the sea. Like the sea, the mountains can also be perceived to be alive: avalanches and landslides occur at intervals, sometimes causing destruction and chaos. There is evidence of prehistoric landslides at Aga (cf. chapter six), and we must assume that such events happened regularly in prehistory, despite the general lack of evidence and investigation. Such disasters would have had an impact on how people perceived the landscape and whatever powers they believed inhabited it.

Mountains and stone can be associated with spirits that live in stone. Stone can be seen as a membrane between the world of the living and the spirit world – there are ethnographic

examples of this, especially in North America (Whitley 1998:16, 2000) and South Africa (e.g. Lewis-Williams 1981; Lewis-Williams and Dowson 1990; Ouzman 2001), and this idea is usually related to the practice of shamanism. The idea is that the membrane is a boundary between different cosmological spheres. Australian ethnography also has examples of how places are chosen because of their significance in terms of the Dreamtime (Taçon 1994; Taçon and Ouzman 2004). Within Scandinavian archaeology, Lise Nordenborg Myhre's study on the rock art in Rogaland (2004) deals with this perspective. She finds that stone is important in two ways, first, that some outcrops resemble upturned boats, and second, that ship images appear to "sail" into cracks in the rock and reappearing (2004:179; Ballard *et al* 2003). This is interpreted in terms of a voyage to the inner space of the rock. Sometimes the ships appear to sail into a concentric ring figure as well; e.g. at Flote and Haustveit in the study area (see appendix D). Not only does this add another interpretative dimension to rock art, but it also emphasises that rock art is not necessarily two-dimensional.

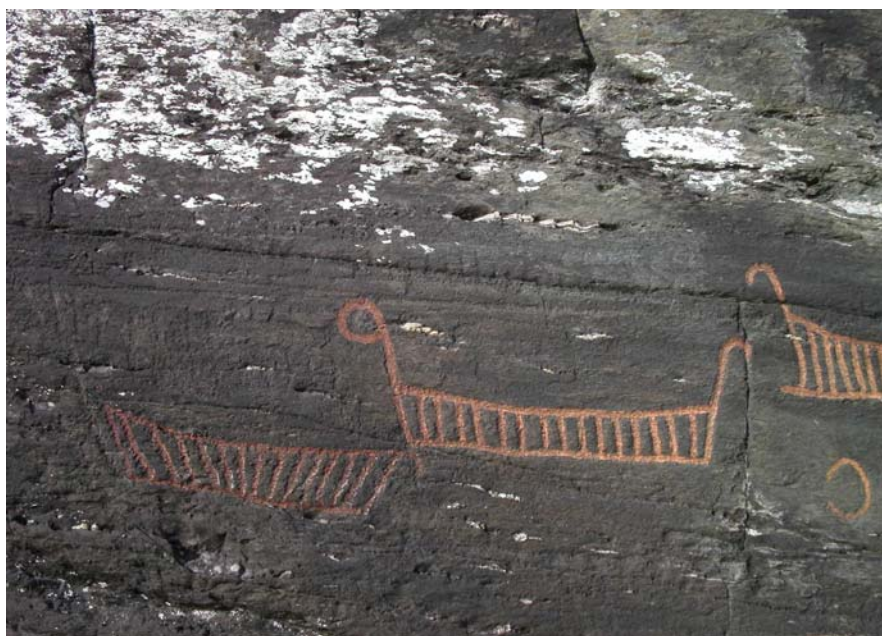


Figure 102 Detail from Vangdal 1. Note the horizontal veins of quartz below the ships. The white areas above the images are lichen. Photo: M. Wrigglesworth.

We should include the possibility that the rock itself could have been perceived to have had special properties. This could possibly even help explain why some rock surfaces were chosen, for instance some of the sites in Hardanger (cf. chapter six), rather than others, when

there are plenty of good surfaces that have not been chosen for making images. The rock could have been perceived as a veil or membrane to another world, perhaps where supernatural beings were thought to exist. At Linga, the rock erodes in a particular way, so that vertical lines are formed in the rock. This makes it difficult to distinguish the ship images, and perhaps that was one reason for choosing this particular rock – there were already “images” present in the rock.



Figure 103 Images around a large crack at Bakke 1. Note the cluster of cup marks above the crack and the ship images below. Photo: Melanie Wrigglesworth.

Likewise, quartz veins appear to have had some significance on rock art panels in general. At Vangdal 1, there are horizontal, boudinaged quartz veins in-between the ship images, giving the impression that the ships are riding on waves. This is also the case at for instance Åmøy in Rogaland county (e.g. Nordenborg Myhre 2004; Goldhahn 2007). At Berge, the large concentric ring figure in the centre of the panel has a depression left by eroded and dislodged quartz. A likely interpretation is that the ring was made around the quartz. There are also quartz veins running along the rock face on this panel, and the images do appear to have been arranged accordingly. At Bakke, the images appear to have been ordered around large cracks

in the rock (103), and they also follow the contours of the rock. It is possible that these patterns are due to prehistoric notions about the nature of rock and ideas about the world.

Both hoards in dry contexts and cup mark sites are interesting in this perspective. Several hoards and votive deposits have been found under or near stones and boulders, next to rock faces, in cracks in the rock, and in-between stones and boulders in screes. Some of the hoards in the study area were located in the mountains, or at least at higher elevations. The sword at Lekve (B 1008) was stuck in a crack close to a boulder with a cup mark, more than 400 m.a.s.l. Another example is the Fårdrup axe at Årekol (B 3389) which was found close to a rock face, around 200 m.a.s.l. These locations suggest that both stone as a medium and the location were significant. Rock art sites in the mountains, mainly cup marks and some rings, could be interpreted along similar lines. Many cup mark panels are found on large boulders in or near ancient screes.

I suggest that votive deposits in the mountain area as well as the practice of making cup marks in the mountains could have been related to beliefs linked to the perceived powers or spirits that inhabited stone in general and the mountains in particular. In an economy based on animal husbandry, mountain pastures were crucial, and it is conceivable that the importance of the animals might have led to a wish to protect them from the powers that were believed to exist in the mountains – or ensure the protection of those powers against the dangers of the mountains: avalanches, landslides and other perils.

7.2. Social memory

In previous chapters I have demonstrated that there is continuity in the archaeological record. Social memory is one way of interpreting this continuity. I will also use the concept of inertia to consider the formation and maintenance of identity, and in the following I will be considering mainly local identity in the study area. In a society with an increasing stratification, where rights to pastures, land, fishing, and hunting tenures might have been a cause for disagreement, stability is important. This includes social institutions that are permanent and stable. Animal herds would have constituted considerable wealth, and this could well have led to conflicts. Ownership of land or pasture as well as rights to pasture would have been crucial, and with the economic expansion throughout the Bronze Age, would have been a source of potential conflict and social instability. In this perspective,

kinship and the transmission of knowledge become important. Rights to pasture could well have been controlled through kinship, so that genealogy and history are important for claiming rights.

Rituals are important in terms of social memory, because they are repetitive by their very nature. The same things are done or happen at a specified time. This creates recognition and a familiar structure, which is fundamental to how social memory works (Connerton 1989). Repetitive actions are a means of cementing ideas, histories, and relationships. As such, they contribute to building a habitus. Rituals and ritual performance are thus ideal for transmitting knowledge and creating a common identity, and preserving social memory. Knowledge can be “hidden” in rituals and mythologies. One example is knowledge of sea routes, in particular long sea routes. Knowledge of some sea routes were perhaps preserved in mythologies that were transmitted through rituals or esoteric knowledge that was transmitted during *rites de passage*. This knowledge included information on harbours, dangerous areas at sea, landmarks used for navigational purposes, shallow waters, tides and currents, as well as cosmological and mythological stories and information about places and events. In an everyday perspective, shorter sea routes would have been learned through practical experience, by taking young people to sea with seasoned seafarers. Learning to navigate local waters was probably part of growing up, but could have had some cosmological or mythological connotations.

Continuity and re-use of sites and monuments are indications of social memory, e.g. sites where objects have been deposited on several occasions, secondary burials, making new images on a rock art panel. There are many plausible reasons why one would return to a specific place: the place has meaning in some way or another, perhaps because one associates something with the place, stories or experiences, for instance. A place could be defined as important by the community, perhaps because particular events took place there, or because it is accessible. A place could also be defined as important for religious reasons.

A cairn represents an identity of place, because it is related to a specific person, or several persons, perhaps relatives or ancestors. Through a personal connection to whoever is buried in the cairn, or through knowledge about them, a familiarity and a sense of belonging to the cairn itself, as well as the place in which it is located, are created. Likewise, rock art sites create an identity of place in terms of knowledge about the images and their meaning and who

made them. Events or rituals that have taken place at the sites might also contribute to a shared familiarity. As argued in chapter five, the chronology and typology of the images indicate that the sites were used over a long period of time, i.e. people returned to them, and sometimes made new images. Both burials and rock art sites create identity, they also function as meeting-places socially where certain rituals take place. Burial rituals have two functions: they ensure the safe passage of the deceased to the underworld, and serve to establish order and cement social relationships among the living. For this reason I consider cairns and rock art sites as nodes, places where people meet and where social relationships are strengthened. Below I will discuss three examples of how places create identity and relationships through social memory.

7.2.1. Memory and place: hoards and rock art

A unique example of how a site can be important over a long period of time is the rock art site *Haustveit* in *Ullensvang*, where a pair of Neolithic axes was recently found near the boulder on which the rock art was made (Lødøen pers. comm. October 2008). There is no evidence to suggest that the site was used continuously from the Neolithic to the Bronze Age, so far only the two axes are known. Future excavations might reveal more finds around the boulder. Two axes or clubs are reported to have been found in the area, but they were not given to the museum and their whereabouts are now unknown (Mandt Larsen 1972). However, this place could have been used without leaving identifiable archaeological traces, and it could have existed as a place in the memories, histories, and traditions of the people who lived in the area. Later, this was cemented by making images in the boulder; on the other hand, it could have been a pure coincidence. The images were most likely made on a number of occasions, on repeated visits to the place, as is indicated by the chronology of rock art (cf. chapter five). Repeated visits create a familiarity and a relationship to a place. A similar situation is that of the large boulder on which *Vinje 1* is located in *Etne*. The images are found on top of the boulder (cf. appendix D). A small test trench was dug in the 1950s, which revealed a ditch and charcoal, and some flint, including an arrowhead (B 10706) close to the boulder (Bakka 1958b). The arrowhead indicates a Late Neolithic date, but it is not possible to ascertain whether the images and the charcoal are the results of one single event. I find it more likely that the boulder was used over a long period, and that the events included different types of rituals and ritual expressions.

The practice of votive deposits, both in wet and dry contexts, is a long tradition. This practice is particularly prevalent in the Neolithic. Axes, daggers, flint discs, spoon shaped scrapers are commonly found underneath or near boulders, in cracks, in springs etc (cf. chapters four and six). This pattern is found in the Bronze Age as well, as we have seen, across all landscape zones. Although the material chosen for deposition did change, the same type of place was chosen for depositing objects. We cannot know whether the actions, rituals and ideas related to the deposition of a hoard changed or remained the same. In any case, the choice of the same type of place would indicate an established practice or tradition, or even a continuity of place.

7.2.2. Memory and place: vertical rock art panels

A second example of how social memory might have worked in the study area is exemplified by a group of rock art sites in Hardanger and Vindafjord (Ølen). In a relatively small area, several remarkable sites are found along the northern part of the Hardangerfjord. What makes these sites remarkable is that the panels are found on vertical rock surfaces. Two of these sites, Rykkje and Vangdal 2, are dated to the Stone Age. The remaining vertical sites are Vangdal 1, Linga, Berge, Fonnaland and Hammarhaug, and in Vindafjord (Ølen), three panels are found on vertical surfaces at Utbjoa. As most Bronze Age rock art sites are found on horizontal or slanting panels, vertical panels are comparatively unusual; hence finding six such sites in a relatively small area is out of the ordinary and is a clear pattern in the selection of locations for making rock art. These sites have several points in common apart from the vertical surface. They are located at the foot of hills, cliffs or large outcrops, close to the sea. The panels at Utbjoa have a different character compared to the panels in Hardanger, Utbjoa 4 is found on a low vertical rock surface, while Utbjoa 2 and 3 are found on almost oval vertical surfaces (cf. figure 75, chapter six). They are not located at the foot of cliffs, but they are close to the sea. The dominating motifs are ships, in particular A1/B1 type ships (cf. chapter five) and the oldest carvings appear to be located at the top of the panel, getting progressively younger closer to the ground, as at Berge. On two panels, Vangdal 1 and Utbjoa 4, the ships are arranged in a horizontal sequence, while the ships at Linga 1 cover the entire surface and give the impression of being less ordered.

These sites have specific properties in terms of structure, motifs, and location in the landscape. There are no other sites with the same type of motifs on horizontal or slanted

panels north of the Hardangerfjord. The only rock art sites on the southern side of the fjord are Bakke, Tveit and Sævarhagen in Jondal and Årsand in Kvam (cf. Mandt Larsen 1972). Suitable outcrops are abundant, which indicates that for some reason, rock carvings had to be made on vertical surfaces in this particular area. As there are two Stone Age rock art sites in visible and partially accessible locations in the area, it is possible that the Bronze Age sites were chosen because of the older sites. Both Stone Age sites are vertical, so choosing structurally similar sites could have been one way of linking to the past. The stylistic variation at the vertical sites also indicates that they were repeatedly visited. Sometimes, several hundred years may have passed before new carvings were made, for instance at Berge where the ships on the lower part of the panel are contoured and are dated to period 5.

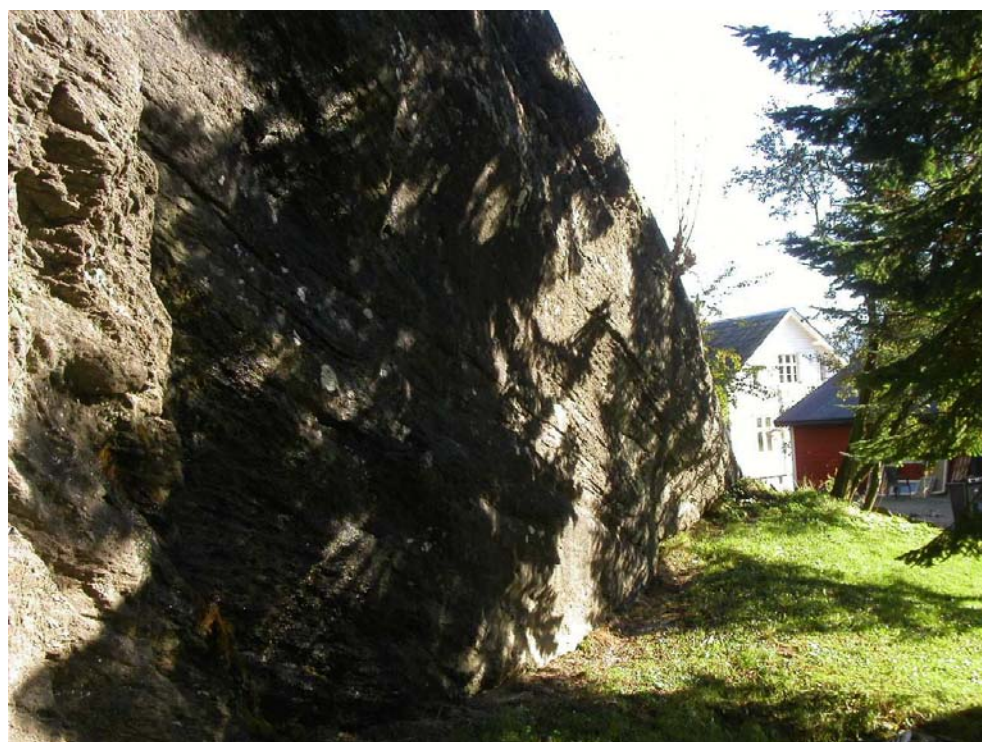


Figure 104 The vertical panel at Berge. Photo: M. Wrigglesworth.

Throughout the Bronze Age, people returned to these places. In this way, the sites took on a special significance and became nodes, places that were important to people living in the area and that were visited regularly. Furthermore, it could be argued that there is a continuity of place at the sites. By this I mean that a particular site was used over a long period of time, or that certain qualities of a place determine the choice of location. In the case of Vangdal 1 and

2, a continuity of place from the Stone Age to the Bronze Age is evident. The same also applies to Linga and Berge, where the presence of A1 type boats and Late Bronze Age ships also indicate that the places were continually used throughout the Bronze Age. At Rykkje, the now lost Bronze Age carvings would indicate some continuity of place here as well. Hammarhaug has ships that were made in period 3, i.e. the middle of the Bronze Age, but seems to have been used mainly in the Late Bronze Age (cf. chapter five), while the images at Fonnaland might have been made on one single occasion as the ships are very similar. However, I suggest that there is a continuity of place at these sites, they have vertical panels and have the same location in the landscape, i.e. they are visible and accessible, they are close to the sea and there is an extensive view from the sites. These sites came into existence because the places were structurally similar to Vangdal, Berge, and Linga.

Rock art was hardly made in Hordaland in the Stone Age, as far as we know. There are few indications of Mesolithic activity in the area (Bergsvik and Wrigglesworth 2008). This tendency changes in the Neolithic, when there is an increase in the number of objects and spatial distribution (Aksdal 1996; Bergsvik and Wrigglesworth 2008). It would appear that there was a long hiatus before people started marking the landscape again, perhaps sometime in the Late Neolithic as far as cup marks and some geometric motifs are concerned, while figurative rock art was not made until sometime in the Early Bronze Age, and apart from the lower images at Vangdal 2, which could be Neolithic. When rock art was made again, the people who made them chose the same type of location as the Stone Age sites. The vertical sites could thus be said to have a Stone Age location, in highly visible and accessible places. Thus, the Stone Age sites structured the location of the Early Bronze Age sites, which in turn structured the later sites. If we accept that the lower images at Vangdal 2 are Neolithic – or at least later than the topmost figures – we can conclude that this particular cliff has been significant for several thousand years. Choosing to start making new images here, albeit on a separate panel, would therefore be a powerful statement, if one knew about the older panel. As the cliff is considered as a landmark, its characteristic shape could have been enough to make it a “special” place and merit to be marked with images.

Several of the vertical sites were used over a long period of time. They were places that people returned to, and had characteristic properties so they would have been easier to recognise – if one knew what to look for. More importantly, the sites might have had characteristics that were remembered and associated with other sites, i.e. the two Stone Age

sites, and later in the Bronze Age, the earliest ship-dominated sites at Vangdal and Linga were “models” for other sites. The fact that A1/B1-type ships dominate at some of these sites could perhaps indicate a local tradition and a local identity. If the sites were in fact created at these specific places because they looked like the Stone Age sites, then they might have constituted a specific tradition that local people identified with.

7.2.3. Memory and place: the re-use of cairns

Another example of the expression of a social memory and a local identity might be the re-use of cairns. As seen in chapter four and six, the cairns follow the pattern that we see elsewhere in Scandinavia: they are round, have a primary burial chamber, and many were re-used for secondary burials, often several centuries after the monument was first built. There are several examples of this practice in the study area, for instance at Hystad (Bakka 1958a, 1972). One of these cairns, at Valevågen, contained four secondary burials (see chapter four and Appendix B). The burials were small and were placed outside a wall that surrounded the central burial, a long cist that must have been built in the Early Bronze Age. The secondary burials were placed next to the wall, and more stones were added to the monument, re-shaping it (cf. chapter four). This particular cairn was used over presumably a long period of time, and new burials were added. Several of the excavated cairns in the study area have more than one burial. At Eide in Kvam, there were three cists, one of which contained two urns that can be dated to the late Bronze Age. Remains of several cremation burials were found in the Olahaugen barrow in Etne, and the Garahaugen barrow had two secondary graves, one from the beginning of the Late Bronze Age, and one from the Pre-Roman Iron Age (Magnus and Myhre 1970). These examples illustrate how cairns and barrows were re-used over time, and thus how they could have worked as visual reminders of memories and knowledge. By coming back to the monuments and using them, a specific identity of place developed, and knowledge about past generations, genealogy and so on was maintained. It is possible that the secondary burials did not belong to members of the same family, but rather to persons who wished to associate themselves with whoever was buried in the monument. Whatever the scenario, graves were significant in retaining a social memory. The Garahaugen barrow is a prime example, as it was built on previously cultivated land, presumably close to contemporary settlement. It would have been seen by any number of people on a daily basis, and would thus have been a powerful reminder of history and status. Indeed, in the Late

Bronze Age a secondary burial was set into the barrow, and the monument was re-formed and re-built (cf. chapter four; appendix B).

7.3. Rock art and the social sphere

So far in this chapter I have considered the cosmological framework in the study area, and I have considered social memory, inertia and identity in terms of rock art, graves and hoards. In this section I will continue to relate rock art to a social sphere and to everyday life, and the focus will be on the location of rock art, i.e. land use, and on the ship. How rock art was used is also a reflection of the habitus, of how people engaged with their world and how they went about their everyday life.

A relevant question is how important was rock art in society? Although there is a great concentration in the study area, when considered over a period of 1200 years rock art production might not have been regular. Based on the premise that a generation is 25 years, then 4.60 ships were made per generation in the study area, based on the minimum number of ships identified here (cf. chapter four). On average, the annual number of ship images is 0.18 ships. Even if some ships might have been made on the same occasion based on their similarities, for instance at Fonnaland and at Vangdal, this would indicate that ship images were not made often, maybe years apart. Consequently, this could mean that making rock art and making ship images in particular was not a regular feature in people's lives, but happened on special occasions and for specific reasons. Cup marks, on the other hand, are numerous in comparison and could have been made regularly. If we accept that all documented cup marks in the study area were made in the Bronze Age, this means an average of 2.2 cup marks a year, and even less if some are dated to the Late Neolithic and the Early Iron Age. A total of 3283 images have been identified in the study area, not including unidentifiable motifs such as fragments (cf. chapter four). This works out as an average of 2.73 images a year throughout the Bronze Age. The apparent low frequency does indicate that rock art production was not an everyday event, although interacting with images could have been done on a regular basis.

7.3.1. The pragmatic use and ritual aspects of rock art

The archaeological material indicates that both cultivation and animal husbandry were fully introduced in the Late Neolithic, and were firmly established in the Bronze Age in West Norway (Hjelle et al 2006). The trade networks supplied flint daggers and sickles, as well as

bronze, and this could also have included knowledge or other commodities such as seeds, and animals. Bones from cattle, sheep, and goats have been found in Early Bronze Age contexts, while the pig appears to have been introduced in the Late Bronze Age (Hjelle et al 2006). There are palaeobotanical indications of grazing in the Early Bronze Age across all zones (Hjelle et al 2006), and there is evidence of agriculture in several locations throughout the study area, including settlements with fields in the Early Bronze Age and onwards (cf. chapter six), but few sites have been excavated. Animal bones have rarely been found, although the rock shelters at Herand in Jondal have yielded bones from cattle and sheep in layers dated to the Bronze Age (Bergsvik pers. comm. 2006). At Ullshelleren, bones from cattle and sheep were found in layers older than the Pre-Roman Iron Age (Odner 1969:18, 32). The type of animal husbandry and pastoralism practiced in the study area did in all likelihood vary depending on the type of landscape. Along the coast, heaths were created as a result of forest clearance through burning and grazing (Prøsch-Danielsen and Simonsen 2000). Thus, the landscape here would have been naked, with little vegetation, and more suited to animal husbandry. There would have been areas of good, fertile land, for instance in central Fitjar, parts of Tynes, Bømlo and Stord. Further inland, the palaeobotanical data indicate cultivation and grazing, and tree pollen also indicate that the land was not completely cleared, there were still forested areas, probably on the mountain slopes, while some areas with favourable conditions for cultivation were cleared (Hjelle et al 2006). Recent excavations and surveys have indicated that cultivation took place on slopes at higher altitudes, for instance at Flatebø (cf. chapter six).

Some researchers have suggested that the economy in the West Norwegian Bronze Age was based on a mixed economy consisting of small scale agriculture, hunting and fishing (e.g. Bakka 1993), and some argue that pastoralism was an important component (Prescott 1993, 1995). Pastoralism is a term that is often associated with a nomadic way of life; however, there are several pastoral strategies, including transhumance. Pastoralists are “those who are dependent chiefly on their herds of domestic stock for subsistence” (Krader 1959:499 in Prescott 1993:56). Pastoralists do not concentrate on animals alone; they are also involved in cultivation, hunting, fishing, or trade. Secondary products such as blood, wool, milk, and traction (Sherratt 1981, 1983) enable pastoralists to consume without depleting capital, so domestic stock may also constitute wealth. Territorial expansion in order to secure more land for grazing is vital, which can lead to conflict and instability. It is likely that the subsistence in the study area was based on agro-pastoralism, due to the physical conditions. An economy

based mainly on cultivation would have been difficult in the inner Hardangerfjord area, for instance. In a landscape dominated by steep mountains, there are not many areas that could be used for primitive agriculture – although early sites were located on slopes. The steep hills are more suited to animal husbandry (cf. chapter four). In the Sør fjorden area in particular, the areas where agriculture is possible are found in valleys that lead up to the mountain plateau, and the hills are moraine terraces – steep, but small areas that can be used for grazing.



Figure 105 View of Børve. Photo: Egil Bakka 1956 © Bergen Museum.

With the introduction of agriculture, the physical landscape changed considerably. Large areas were cleared for fields as well as pasture. Growing crops caused a shift in how people related to the landscape, with a need to be more sedentary, and therefore a new relation to place. Likewise, animal husbandry created a need for pastures, and again, a new relation to place. New subsistence also led to new movement patterns – seasonal and regular movement from the settlements to the mountains. This movement in the landscape is related to identity, in the sense that the paths one uses and the places one visits or passes are part of a construction of a cultural landscape, and a construction of identity. The patterns of movement are an integral part of inhabitation, as the routes people take become habitual. In this way, knowledge and personal identity are related to movement in the landscape. Knowledge about

paths, places along the way, rights to use certain parts of the land etc were most likely transmitted through practical experience. Other knowledge could have been transmitted through for instance genealogy, stories and rituals. This new relationship with the land might also have led to a need to mark places and to understand places in a different manner, by marking the land with rock art. Thus identity could have been closely related to the land. Ownership of land or tenure and rights to grazing areas and use of mountain pastures must have been important issues. These rights might have been transmitted through e.g. kinship.



Figure 106 Goats at Flote, in a typical grazing area. Photo: Melanie Wrigglesworth.

I suggest that some cup mark panels could be related to early farmers and pastoralists in the Late Neolithic and Early Bronze Age, and that this has to do with taking control of nature. The introduction of agriculture and pastoralism implies a new and different relationship to the land. This entailed a new attitude towards nature, which now had to be approached in a way that was fundamentally different. Nature had to be controlled, and by making rock art, a cultural mark was set on nature (Bradley 1994:96). The practice of making cup marks and

geometric figures such as concentric rings could have started as a way of inscribing the landscape and stamping one's identity on the landscape. By making places such as rock art sites through ritual, a social and cultural identity is inscribed onto features in the landscape, thus establishing a sense of belonging (cf. Taçon 1994). If we accept that the first cup marks and geometric images were made at this time, then rock art could have been one way of establishing a relationship with the landscape, to familiarise it and establish both ownership and rights to grazing areas. This practice was further cemented in the course of the Bronze Age, when there seems to have been an economic expansion in west Norway which made an intensified use of mountain resources (Prescott 1995).

The elevation of rock art panels can perhaps give us a clue to land use and perception. Figure 107 summarises the number of panels within 100 metre segments. Most panels are located up to 100 m.a.s.l.; a fact which I also demonstrated in chapter six. There are peaks up to 200 m.a.s.l., and from about 600 to 800 m.a.s.l. The majority of sites are found up to 200 m.a.s.l. These sites include both cup mark sites and figurative sites. In Etne, almost all sites are found at more than 100 m.a.s.l., while the sites in Vindafjord (Ølen) are found at around 5-15 m.a.s.l. The greatest variety is found in Hardanger, where sites are located from 3-10 m.a.s.l. to more than 1000 m.a.s.l. The sites at higher altitudes are cup mark sites, with the odd foot print and ring motif.

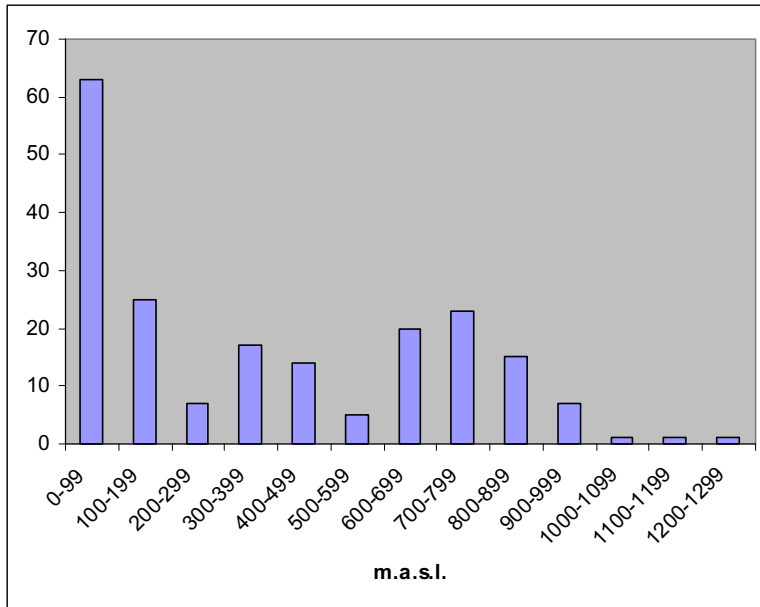


Figure 107 Elevation of rock art panels. Panels that have no provenance are excluded. The table is organised by panel rather than site, as some sites have several panels spread over a large area and elevation can vary considerably.

As we have seen in chapters four, five and six, the majority of cup mark sites are found on smaller terraces. These locations provide good pasture for animals in spring and summer. Access to pasture would have been essential, and the use of these terraces was thus vital. The terraces were likely used in a seasonal transhumant pattern of movement between the fjord and the mountains. The movement patterns could have been quite extensive. Based on excavations at Nysset-Steggje and Skrivarhelleren rock shelter in Sogn and Fjordane county, Prescott developed a model for the use of land in the inner Sognefjord area, from the Late Neolithic to the Early Iron Age (Prescott 1993, 1995). In the Late Neolithic and Early Bronze Age, there were two bases, one near the fjord that was inhabited in winter, and one in the sub-alpine zone that was used from spring to autumn. Cereal cultivation and fishing took place in the lowland, while hunting, gathering and pastoral production took place in the sub-alpine zone, with expeditions to the alpine zone to hunt reindeer or find higher pastures. In the Late Bronze Age, a base was also established in the low alpine zone, and alpine areas were increasingly used. This entailed seasonal movement from settlements in the lowland to the sub-alpine zone, to bases in the low alpine zone, as well as smaller specialist sites used for hunting or shepherding. In this way larger areas could be used for pasture, according to the

season (Prescott 1991, 1993, 1995). This system is similar to the summer farm system used from the Iron Age and up to modern times, but it does not necessarily mean that summer dairy farming started as early as the Late Neolithic. Rather, the model indicates how all parts of the landscape were gradually used and exploited.

This model can in part be transferred to Hardanger and Etne – the study area is not as marginal as the area studied by Prescott, but some elements are relevant here as well. The model implies extreme mobility, which seems unlikely in the study area where the distances between the farms and the higher pastures are short. We have seen that the settlements were located in the lowland, and the distribution of flint daggers indicated use of the Hardangervidda plateau. A number of sites have been excavated on Hardangervidda (Indrelied 1994), with dates ranging from the Mesolithic to the Medieval period, including projectile points that can be dated to the Late Neolithic or Bronze Age. The mountain resources had been exploited for thousands of years, but now the mountains were used for pasture as well. There would also be intermediary stations between the lowland and the mountains, places where the animals could graze according to local conditions and time of year, as well as hunting stations on the Hardangervidda. In this way, it would have been possible to use different parts of the landscape, in particular the terraces leading up from the fjord to the mountains in the Sør fjorden. As few sites are known in the study area, this model cannot be completely transferred or proved.

The location of rock art sites throughout the Bronze Age indicates a growing need for larger, common events that create a sense of belonging and identity. In period 1-3, rock art sites were located close to the shore in rather spectacular locations. This continued in period 4-6, when images were added to existing panels, and new sites were created. The sites appear to become more public, in the sense that they are easy to see and may command wide views, and they can accommodate larger groups. Both Bakke 1 and Flote 1 are good examples. As shown in chapter five and six, there are peaks in the rock art production in Hardanger and Etne in period 3 and 5. Interestingly, those peaks correspond with an economic expansion in the Late Bronze Age, seen in West Norway as well as in Scandinavia as a whole, with an increased amount of bronze objects and more extensive exploitation of resources (Prescott 1995; Vandkilde 1996; Kristiansen 1998; Johansen 2000). Hence it is tempting to interpret the cup mark sites at higher elevations in relation to an economic expansion throughout the Bronze Age, and in particular in the Late Bronze Age, with particular attention on animal husbandry

(Innselset 1995). Figured rock art sites could also be related to an economic expansion. Tenure and access to pasture could potentially lead to instability, as rights might be debated, leading to social or political instability. Rock art sites might have been neutral ground, where any differences were set aside. In a community where there might be some instability, rock art could have had a stabilising role.



Figure 108 Børve 4, located on the path to higher pastures. Photo: Egil Bakka 1956 ©Bergen Museum.

7.3.2. Maritime interaction and maritime ideology

In this section I will discuss maritime interaction in West Norway, in terms of ships and journeys, and maritime ideology and how this might have worked in the study area and West Norway in general. As indicated in section 7.1 above, I argue that ritual life and cosmological and mythological ideas, as well as social institutions were centred on the sea and the ship. Ships, the sea, and travel were part of daily life as well as ritual life, so I will start by considering boats in the Bronze Age and compare them to the ship images, and consider possible maritime interaction in the study area. Although ship images are considered as ritual or mythological in character, they were made within a social setting; hence I will argue that they were made as part of maritime interaction.

Ships depicted on rock art panels have been interpreted as depictions of real ships as well as depictions of imaginary or symbolic ships. In his work on the rock art at Nämforsen in Sweden, Tilley argues that the ships are not real ships, but cosmological depictions (Tilley 1991:77). However, I find it unlikely that the persons who made the images did not use real boats as models, or depict real ships even though they might have been representations of cosmological beliefs. Boats were a necessity in Scandinavia in general and particularly in the study area – they must have been used on an everyday basis.

Few prehistoric boats have been found, and few are dated to the Bronze Age. The Hjortspring ship, a war canoe found in a Danish bog and dated to the Pre-Roman Iron Age, is the best known prehistoric Scandinavian ship (e.g. Crumlin-Pedersen and Trakadas 2003). There has been some discussion as to whether Scandinavian Bronze Age ships were sewn-plank or dugouts, but the Hjortspring boat was made from planks, and it is generally thought that similar techniques must have been used in the Bronze Age. Some rock art ships have been dated to period I or the Late Neolithic, especially the square A1/B1 ships. In a recent paper, Einar Østmo argues that ship technology advanced in the late Neolithic as part of a Bell Beaker diffusion north from Denmark, and that the square ships might be depictions of ships used at that time (2005). In chapter five, I argued that the square ships were likely from the Early Bronze Age, with a proviso that they could be Late Neolithic, although there is no clear dating evidence. There is also some uncertainty as to the construction of the square ships, are they depictions of hide boats or sewn-plank boats? If we consider them as related to the boat images on rock art panels dated to the Stone Age in Central Norway, they might be images of hide boats. On the other hand, some square ships in West and Southwest Norway have horizontal lines across the hulls, which could be interpreted as planks. Both alternatives are possible, and it is probable that sewn-plank boats did exist in Scandinavia in this period. This is further indicated by the remains of ten sewn-plank Bronze Age boats found in Britain, including the North Ferriby and Dover boats (Van der Noort 2009). These boats range in date from about 2030-1780 cal BC for Ferriby-3 from North Ferriby to 825-760 cal BC for the Brigg “raft” (ibid:161). The Dover boat is thought to have been capable of sea-going journeys (Marsden 2004; Van der Noort 2009), and is dated to 1575-1520 cal BC. It had a square transom end and was flat-bottomed. There is no reason to believe that such boats did not exist in Scandinavia. They have simply not been preserved, or the boats might have been dismantled and the materials reused when they no longer could be used at sea. Moreover, the differences in the ship images probably indicate that several types of boats existed, dugouts,

hide boats, and plank-sewn boats, depending on what use they were intended for (Berntsson 2005; Kvalø 2007; Ling 2008). For instance, small boats could have been used for local travel and fishing, as they have been used in historical times as well as today. Larger ships might have been used for longer journeys or warfare. Ling has compared the ratio of the hull and stems of the Hjortspring ship with the proportion of ship images and finds that they correspond, which indicates that there was a norm for ships in Scandinavia, and that this was present in ship depictions as well (Ling 2008:194; see also Bradley 2008).

There are many possible activities that could have taken place on the shore or at sea, e.g. fishing, exploitation of other marine resources, rituals, negotiations and transactions, and travel. It is worth remembering that fishing has always been an important subsistence along the coast, not only in West Norway, but in coastal Scandinavia as a whole. Interestingly, the major rock art centres in Scandinavia are found in rich fishing areas (Ling 2008:221). Fishing could well have been accompanied by rituals before setting out to sea or there could have been superstitions that had an impact on actions at sea. Evidence from Swedish and Danish sites indicates that fish bones are as, or more, numerous than bones from household animals (Berntsson 2005; Ling 2008). The bones are from deep-water fish, cod, pollack, herring, and mackerel. There is less evidence of fish bones at sites in the study area, although a small quantity of fish bones was found in Sævarhelleren in Jondal (Knut Andreas Bergsvik, pers. comm. 2010). Few skeletal remains from the Bronze Age have been preserved in Norway, and few have been analysed. It is interesting to note that analysed bones from Trøndelag in Central Norway indicate that marine food was not consumed in some areas (Fyllingen 2002:71). However, the data set is too small to conclude. Berntsson notes for the material from Scania and Denmark that marine elements in the diet vary from area to area, in some areas the C13 ratio indicates that marine food was part of the staple diet, while in other areas it appears that seafood was hardly consumed (Bengtsson 2005:120). As there is no evidence to the contrary, it is assumed here that seafood was eaten in at least part of the study area. Specific rituals might have been related to particular activities in the shore area, for instance preparing to depart or at arrival after a fishing trip, or rites de passage. It is also conceivable that boat building was accompanied by rituals.

Sea journeys are not an easy endeavour. Currents, storms, and treacherous areas mean that most long-distance journeys were potentially fraught with danger and high navigation and pilotage skills were essential. Such knowledge might have been transmitted through rituals or

initiation rites. Rock art on or near the shore could be interpreted along these lines. The ship images could relate to cosmological and mythological beliefs and stories that were necessary to know before travelling at sea. Hence the rock art could have been made as part of initiation rites, but also as part of rituals connected to departures or arrivals. If we follow Mary Helms (1988, 1998), long-distance journeys for the acquisition of exotic goods or knowledge might have been associated with cosmology and transitions, in which case making rock art at the departure or arrival could have been one way of commemorating or marking that transition. Equally, rituals on the shore involving rock art could have been one way of controlling the power of the sea before embarking on a journey, whether long or short, for instance deep-water fishing expeditions. The rituals might not have included making rock art, as the number of ship images do not indicate that more than a few images were made in a generation on average. If an image was made for every fishing trip or other journey, the number of images should have been significantly higher. Rather, the average number of rock art images per year suggests that rock art, in particular ship images, was made on special occasions.

The type of maritime interaction in the Bronze Age could have been centred on travel, contacts and exchange, both in a pragmatic and a cosmological sense. Why would one need to travel? The obvious answer would be in order to acquire bronze for elite consumption. The archaeological record indicates a network from West Denmark to South and Southwest Norway in the Bronze Age (e.g. Kristiansen 1998; Kristiansen and Larsson 2005; Kvalø 2007; but see Engedal 2010). This network would have been maritime in character, and might have included Rogaland county. From this point, bronze objects were distributed to the rest of West Norway. In terms of bronze, the networks were vital and as such the ship was an important symbol.

The networks were important for other reasons as well, such as the exchange of marriage partners, information, knowledge, and other types of goods, for instance soapstone for casting moulds. Stuart Needham has introduced the term “maritory” in order to study maritime networks, defining it as a historically specific form with a variety of economic and ecological elements (2009:15). A maritory is a definable zone of interaction used for what Needham calls specialist maritime exchanges (ibid: 18), which includes exotic goods and esoteric knowledge, marriage partners or craftsmen etc. It includes the sea, the coast and land, in terms of resources, tides, navigation, harbours, supplies. Interestingly, maritories could encompass many different cultures, which could potentially lead to some degree of cultural similarity.

This means that there might have been levels of difference and similarity - some areas of life could be influenced by contacts with other cultures, while some areas did not change, and there could have been several local responses to outside influence and contact. Cosmological or mythological ideas could thus have been included in a maritory. In southwest Norway, a maritory could have existed from Rogaland county to West Denmark and Jutland, possibly extending north into the study area.

For any maritory or network to exist, certain preconditions must be met. There must be enough people to crew the ship, the crew must include specialists on navigation, tides and currents, on ships (for repairs), perhaps also people with language skills. A ritual specialist might also have been required, to make sure that the voyage did not upset any supernatural powers. In addition, certain features along the coast were necessary: harbours and places to shelter in a storm, as well as stocking up on food and other provisions. Thus, a long-distance journey did not only involve the ship and its crew, but also the communities that were home to the crew members and the communities that were encountered along the way.

Ships represent a specialised knowledge. Obviously, knowing how to build a boat would have been required. Presumably, boats were built on a regular basis and most likely locally. However, this would have required time and detailed preparations, making all the different parts, and procuring enough wood or hides depending on the type of boat. Hence it is likely that larger “expeditions” were not conducted on a regular basis, while we must expect that there were many smaller vessels used for fishing and short-distance travel. Larger ships might have been used for ritual purposes (Berntsson 2005).

The shore could have been a meeting-place in more than one sense. On the one hand, it clearly had cosmological and ritual significance, as argued above. The location of cairns and figurative rock art on or near the shore, as well as marine elements in cairns, imply that rituals and beliefs were related to this part of the landscape. On the other hand, the shore was the start and end point of travel by boat, whether those journeys were short-distance or long-distance. As sea journeys were potentially dangerous, rituals were perhaps required at departure and arrival. On some occasions, images of ships were made in specific places that were perceived to be meaningful. On other occasions, other types of rituals took place at these sites. It would seem that only some specific events required the making of rock art, judging by the low frequency with which the images were made.

The shore would also have been a meeting-place for people, for strangers who came to visit, or needed a stop-over. Hence it would have been an area where social interaction and negotiations took place. Meeting strangers, whether they come to visit, or by going on a long-distance journey, is a critical event. Such meetings can provide new knowledge and ideas, but they also represent a certain danger, in that they provide a contrast and an alternative to the life one knows. In short, meeting strangers puts the life and the society one knows and does not question into perspective (Buttimer 1976). As such, both identity and world-view could be open to change or could be questioned. Thus, acquiring new knowledge and new objects, for instance, would have been dangerous in more ways than one. This could also apply to travellers who returned after a long journey. They would have experienced and learned many things, which would set the crew apart from the rest of the community. Rituals could have been performed to re-integrate them into society so that they did not pose any danger, and then their tales could have been listened to and marvelled at. Hence, rituals that defined the community and its history were important, in order to maintain the equilibrium and reinforce cultural identity.

7.3.3. Liminal places

The location of the various archaeological categories to specific areas of the landscape reflects a cosmology where stone and water both play an important role. Water is related to death in terms of cairns and rock art, and this could be interpreted along the lines of Helskog (1999), who suggested that the location of the rock art in Alta, Northern Norway, in the shore zone is related to cosmological ideas common in many arctic groups. The world is divided into three dimensions: the sky, the earth, and the underworld; and water is the portal to the underworld. The sea is frequently linked to death and the underworld (Bradley 1997a, 2000:12).

The shore bound contexts and the mountain contexts have one thing in common – they are found in liminal places. Bronze Age people appear to have been interested in and fascinated by the liminal. Indications are for instance the location of hoards in bogs and the use of the shore for rock art and burials. The mountains can be liminal places cosmologically as they are tall and therefore closer to the sky. This is particularly important in a world-view that has

three tiers: the sky, the earth, and the underworld. Mountains can also be perceived as alive, as mentioned above, as dangerous places where supernatural powers reside. Cracks, caves, and screes are possible phenomena that could have been associated with spirits. An interesting point here is that many cup mark sites are found around 500-800 m.a.s.l, rather than being concentrated to even higher locations. It could be argued that these sites are located between the built world and the uncontrolled world of the spirits, and that they mark a border between the two “worlds”. Likewise, the location of rock art panels close to water could also be interpreted as liminal, between the earth and the sea or the underworld.



Figure 109 Sea meets land. Photo: M. Wigglesworth.

The shore is a liminal place because it is not fixed: the tide washes in and the shore changes with the ebb and flow. It is a boundary between two elements, land and sea, where land is partially reclaimed by the sea and relinquished due to the tide. There is constant movement of water as the tide comes in and ebbs in a daily cycle, accompanied by sounds: water washing over stone, the rushing sound of the tide, waves lapping against rock. A location on or near the shore means that the rock art is available year-round; it is not usually constrained by ice and snow or other factors. This is emphasised in the cairns, both in their location close to the shore, on headlands that seem to link the sea and the sky, but also through marine elements in

the graves. Taking shells, sand and stones from the beach, from a liminal zone onto dry land, from one sphere to another, would have been a significant cosmological statement. In this sense, the ship is a powerful symbol of transition or transgression between cosmological spheres. Travelling at sea was like being in a liminal state, cosmologically. It is built on land from materials that are land-based, and it traverses the sea. In cosmological terms, the ship images could be interpreted as symbolising the liminality of the shore and the ship.

7.4. Rock art, identity and the habitus

What do we know about the people who lived in the study area in the Bronze Age? The economy was based on cultivation and animal husbandry, with some fishing, hunting and gathering. Animals grazed near the houses, but also on the slopes leading up to the mountains, or in outfields. The settlements were more or less permanent, based on the excavated settlements where in some cases there were houses from the Neolithic, Bronze Age and Iron Age at the same site. The fields were kept close to the houses. People buried their dead in cairns, mounds and possibly in graves that were not marked. Occasionally, some people deposited objects of bronze or other materials in cracks, in-between stones, under or near boulders, in springs or bogs, perhaps accompanied by rituals. On other occasions, rock art was made. This happened rarely, and might have been momentous events in the lives of those who witnessed it. Rituals were important in the Bronze Age, and would possibly have varied from area to area. People in the Bronze Age were interested in and fascinated by liminal places and liminality. Graves were often placed on high points in the landscape, or on the shore, and elements from the shore were sometimes placed in the cists. Likewise, figurative rock art is mainly found on or near the shore. Most of the images in rock were similar to other parts of Norway and Scandinavia, although their meaning might have differed.

Life revolved around the houses, fields, and animals. But people knew of the world beyond their own. Some were able to acquire objects that gave them social status and prestige, such as flint daggers, bronze objects and certain types of stone axes. These objects were procured through participation in networks across the mountains and along the coast, which ultimately reached as far as Denmark and Sweden and beyond. Through those networks, prestige objects, new ideas, and knowledge were acquired and contacts with other communities were maintained. As they had boats, some people also travelled short as well as long distances. The

travellers might have been chiefs and their retinues, or other persons of presumably high social standing, who were able to put together a crew and supplies. There were traditions that were upheld in the community, traditions that defined the people belonging to the community. However, they were open to new ideas, especially those who were able to travel or to acquire new and exotic objects. This was manifested by the introduction of cremation towards the middle of the Bronze Age, which happened throughout the Nordic area and Europe. Knowledge was essential – knowledge about metallurgy, rituals, the past, and other esoteric knowledge.

This is the frame for the habitus in the study area, in which social practice is created and shaped. The community forms the habitus, which is the way we act, think, and are – how we interact with other people, make choices, and decisions. As indicated in chapter three, capital is an integral part of the habitus. The various types of capital, economic, cultural, social, and symbolic, do overlap to some degree, especially in a prehistoric context. Economic capital and social capital could both be gained through obtaining bronze or knowledge that could be converted to cultural or symbolic capital. As such, amassing capital was the prime reason for travel in the Bronze Age, aside from the cosmological connotations suggested above.

The archaeological material and the analysis in chapter six indicate that there was stability and continuity in the study area. There were long-lasting traditions that were maintained. It is hard not to think that these traditions were maintained by a certain segment of the community, for instance an elite or a chief. In order to maintain and legitimise their positions, they could have held large public rituals or events, for instance at rock art sites. This would have contributed to more social and symbolic capital. On the other hand, it is possible that the traditions went even deeper in the community. The location of hoards is one example of the *longue durée*, where the same type of location was chosen in the Neolithic and in the Bronze Age. To my mind, this suggests something that is deeply embedded in the community. Likewise, the reuse of rock art sites indicates long traditions. These places *meant* something to the people who lived in the area; they kept coming back for centuries. The people who came back could certainly have been members of the upper echelons in society, but I find it unlikely that rock art was made exclusively by the elite for the elite. The figured sites are easily accessible and public, which indicates that they were meant for a larger audience. If the rock art had been elitist, one would expect it to be less available, perhaps more secluded and inaccessible. My analysis has indicated that this is not necessarily the case. However we view

Bronze Age social organisation, as chiefdoms or as more simple stratified societies, rock art sites and cairns are representations of knowledge and beliefs that were fundamental in those societies. That knowledge could have been transmitted as social memory, and the sites could therefore be interpreted as nodes of knowledge and memory, which contributed to sustaining the dispositions that make up the community.

Cosmology and mythology as well as social memory can be used to control society, to legitimise the status quo. By maintaining a common history, the state of affairs in the present could be legitimised. In the Bronze Age, this could pertain to certain groups or persons with rank, social and/or political/religious leaders in the community. By actively using references that are known to everyone, status and control can be masked by a common identity and history, creating symbolic power and downplaying social differences. Equally, maintaining the status quo is about maintaining identity – by making sure that things are as they have always been, life as one knows it can go on. In a world where long-distance travel might have been a regular feature and meeting foreign people could have happened from time to time, it might have been important to stick to traditions. Meeting other communities and other cultures puts one's own cultural identity into perspective and could well inspire change, conflict, disagreement and so on. This could lead to inertia in some communities, especially where social institutions are established. If we consider Bronze Age society in the study area to have been entrepreneurial rather than simple chiefdoms, then these societies could have been somewhat unstable. In this perspective social memory and tradition are essential for maintaining some stability and a common identity. By making rock art that refers to cosmological and mythological beliefs and events, and by performing rituals and ritual re-enactments, a common identity could be emphasised. Changes did happen, but they were incorporated within the habitus and gradually became the norm.

A community needs a common ground, something that makes people feel at “home”, that explains the status quo. By referring to the past, a communal identity can be maintained and social status is legitimised (Bradley 2002). The past is an anchor; it structures everyday life and establishes an order, something that gives stability. Rock art could have filled such a function – by referring to actions and events in the past, and thereby taking on an important social dimension. The past defines who we are, and history and genealogy helps define cultural identity. Because the cairns as well as the rock art sites were open and public in terms of location, we may assume that the activities that took place at these places were public, too.

If those activities were public, then their significance must also have been of interest to the general population. A possible interpretation is that this significance was rooted in knowledge that was commonly known within the communities that used the sites. This could have included cosmology and mythology, religious beliefs, and history, and would have contributed to maintaining a common identity. Hence, the images at rock art sites are of interest, as they could have been used to emphasise or communicate certain ideas about the world.

The common ground was perhaps represented by rock art. Although the images are similar across Scandinavia, they might indicate local ideas and beliefs, as images are culture-specific. Codes and symbols have been accumulated over a long period of time, and are part of the cultural “language”, expressing the absence of change and therefore also long-term identity. Thus it could be argued that the rock art motifs, and consequently their location as well, express ideas about the world that are deeply embedded within the local community. However, the exact meaning might only have been known to people within a particular group or local area. The ship is a pan-Scandinavian symbol in the Bronze Age, and it is fair to assume that its deeper meaning would have been apparent to most people living in Scandinavia at the time. However, that is not to say that there were no local variations in the meaning and use of the symbol. So, a person from East Norway could view a panel in Etne and understand some of the meaning, but part of the story might be local and consequently not understandable to anyone who did not live in Etne. In this respect, rock art sites could be considered as nodes of knowledge. Meaning could have varied from site to site. For instance, Flote 1 might have told a specific story, while the images at Fjøsna told another story (Wold 2002, 2005). The rituals that were performed at the sites could also have varied. As meeting-places, the rock art sites could have been a means of building up cultural and symbolic capital.

Narratives, stories about mythological events, genealogies, might have been included in rituals or activities at the sites. Those stories defined the community, they explained the present state of affairs, and they made people feel at home. In this perspective, rock art could be interpreted as inertial; it maintains the equilibrium in the community, because it contains cultural knowledge known to members of that community. In other words, rock art could symbolise or represent the structure of the community. However, it should be noted that even though rock art might have been stabilising, that does not mean that society actually was

stable or that changes did not happen. Rock art might have been one way of resisting those changes. The meaning of the images could have changed, but the practice continued, albeit with some minor adjustments to the visual representation and motif combinations, as more motifs were introduced in the Late Bronze Age.

An interpretation of rock art as maritime in character is unlikely for the majority of cup mark sites in the study area. However, we should not lose sight of the fact that because there is a maritime ideology or cosmology that does not mean that the earth or other parts of the landscape had no meaning. All rock art sites did not necessarily mean the same thing. In terms of maritime interaction, the ship images are possibly related to rituals performed at the arrival or departure of ships, both local and foreign ships. The cup marks were related to practices on land, which were necessary for maritime travel, in terms of provisions. Cup marks might have been among the earliest images made in the study area; they were likely made throughout the Bronze Age and into the Iron Age, and could have been made by early pastoralists in order to define rights or to appease possible powers in the mountains. This does not exclude an understanding of the sea as cosmologically and ritually significant. What it tells us is that there is potentially a great variation in beliefs and world-views in the Bronze Age, and that there could have been regional and local differences. Moreover, it tells us that we should not commit ourselves to one all-encompassing model.

Rock art can be representations of social structure as the images and the sites were used to create narratives or communication of knowledge and thereby create an ideology, or a ritual expression of an elite ideology. By interpreting rock art sites as nodes or meeting-places, this perspective can emphasise the communicative aspect of rock art – what is communicated through rock art and the stories that are told through the images can contribute to maintaining society, social order and identity. Hence continuity is important, because it is an indication that social structures are maintained. Change or stability may provide information on beliefs, identity and behaviour. By choosing the same type of place for various activities, for making rock art or depositing hoards, structures are upheld, stability is created, and life can go on as it always has done. And yet, there is an opening to new knowledge, brought about by journeys and contacts with other groups, through the medium of bronze. Although stability and inertia have been emphasised here, that does not mean that changes did not happen. They did, and they were incorporated into the existing habitus, perhaps by the upper echelons of society. Despite the changes, or perhaps due to them, traditions were adhered to, by returning to rock

art sites and making new images and performing rituals. The rock art sites were nodes of knowledge, places that were used to communicate knowledge and maintain memory, so as to preserve a specific way of doing things and a specific identity.

Chapter 8: Finding your place

My main objective was to understand how the landscape was used and perceived in the Bronze Age, and how people perceived their world, through building cairns, making rock art and depositing valuable objects as hoards. At the heart of this was an idea that such monuments were not placed haphazardly; rather, they were built in places that meant something to those who built the cairns or established rock art sites.

This study has indicated that rock art and the meaning of rock art are linked to its location. In particular, rock art from the Bronze Age in West Norway should not necessarily be interpreted as agrarian or as expressions of a religion centred on the sun. Sites with ship images are located close to the sea, in visible and accessible places. I have interpreted this type of location as public, i.e. that the sites were open and available, to both locals and strangers. In addition, this study has shown that location is an important element in understanding rock art and Bronze Age life and cosmology. The traditional interpretation of Bronze Age rock art as agrarian or related to sun worship is not necessarily flawed. However, location and relating rock art to a social sphere can provide new perspectives that may lead to new questions and new insights. New theoretical approaches can throw new light on rock art and its meaning. Location was not random, rather, it was related to cosmological beliefs and proximity to pastures, communication routes etc. In particular, proximity to water appears to have been important in the case of figurative rock art, cairns and to some degree hoards. There are also maritime elements in cairns, and for this reason I have suggested that a maritime ideology and a maritime cosmology existed in the study area in the Bronze Age.

The ship was at the heart of this cosmology, and symbolised several things. It symbolised movement and travel, especially maritime networks. These networks were important in order to amass cultural and symbolic capital, as some people or groups were able to acquire bronze objects, or other materials, as well as knowledge and alliances through participation in the networks. The ship also symbolised water and cosmological beliefs concerning spirits and the spiritual power of the sea. This is borne out by the apparent importance of maritime elements in graves as well as the location close to water.

In addition to the significance of water, I argued that stone and mountains were significant as well. The basis for this argument is that the majority of cup mark sites are located in the mountain areas, often in areas that have been used for pasture and summer farms. For this reason the sites are interpreted in relation to pasture and animal husbandry, from the Late Neolithic onwards. The cup marks might have been made as a way of controlling nature, as the introduction of agriculture and animal husbandry lead to a different attitude to the land. As the animals represented economic capital, rights to pasture and land use must have been crucial. Making rock art could have been one way of establishing a new relationship with the landscape, by marking it with cup marks and other images, thus also marking ownership or rights of use. I have suggested that the mountains might be perceived as alive by the people who lived in the study area, due to landslides and avalanches, and that stone might be linked to spirits. This might be one reason for making rock art, as stone might be perceived as a membrane to a spirit world. Rock art sites might also have been neutral places, which would be important if the economic expansion throughout the Bronze Age led to conflict or disagreement over rights to pasture or land, thus rock art might have had a stabilising role.

However, the production of rock art was not constant. Although there are a large number of sites and panels in the study area, a breakdown of the number of images seems to indicate that making new images was a rare occurrence. In chapter seven, I showed that the annual number of rock art images was 2.73, but if we relate this to the relative date of the rock art to mainly period 3, 4 and 5, it is clear that there were long periods where rock art was not made, at least figurative rock art. We do not know the frequency with which cup marks were made in the mountains; although it is possible that cup marks were made annually, it is equally possible that production was periodic. This means that ship images in particular, were in fact rare, hence making them would perhaps require extraordinary events and reasons. One of those extraordinary events might have been the arrival of ships after a long journey. Both strangers and local people who returned after a journey might have been perceived as dangerous cosmologically, and rituals were perhaps necessary to neutralise and rebalance status quo (Douglas 2006). Rituals at rock art sites redressed the balance and restored cosmos, whether they involved making new images or not. The images probably had several meanings and were used to reinforce local identity and the social order, through references to history, mythology, cosmology, genealogy, and rituals that upheld social memory. In this way the habitus, or way of life, was maintained and created a frame of reference for people in the community.

Travel is a central aspect of Bronze Age society and there is no doubt that people travelled and brought bronze with them. For a coastal population, travel was a necessity. People used boats on an everyday basis, to cross the fjords, to reach the islands and to go fishing. Long-distance journeys are generally associated with the Bronze Age (e.g. Kristiansen and Larsson 2005), and we implicitly get the impression that such journeys were undertaken regularly, in order to obtain esoteric knowledge and exotic objects. As ship images were dominant not only in West Norway, but in Southern Scandinavia as a whole, it is easy to assume that long-distance travel was frequently undertaken. It was a way for some people or communities to acquire bronze or other items, knowledge and marriage partners, so that economic, social, cultural, and symbolic capital could be amassed. Hence, any long-distance journey had implications for social hierarchy. The ship as symbol thus encompassed the significance of journeys both cosmologically and economically, not to mention social and symbolic capital.

One of my objectives was to see whether the patterns identified in the archaeological record could indicate a local identity or habitus in the study area. I suggest that this is indeed the case. The Bronze Age in the study area and West Norway as such, did not differ greatly from the Bronze Age in Southern Scandinavia, in terms of the type of houses, subsistence, burial traditions, and the practice of depositing objects, the type of objects used, and making rock art. However, this study has indicated that there was local variation in burials as well as rock art production. In particular, there is a clear maritime aspect in the archaeological record, in burials, the ship motif, and the location of rock art sites close to the sea. I have interpreted this as an expression of a maritime cosmology and way of life of a predominantly coastal population that had contacts with other areas of Scandinavia and participated in networks. In this way, the people who lived in the study area could learn of and share knowledge, fashion, new ideas, and exchange various raw materials for bronze or other exotic items. This was not an isolated outpost; rather, people might have expressed their perception of the world – and themselves – differently from other areas of Scandinavia. As indicated in chapter five, some ship images in Hardanger and Etne are similar to ship motifs in Bohuslän, Sweden, while other ship images appear to be local or West Norwegian types. The images point to direct contact with Eastern Norway and Sweden. The maritime elements in some graves might also be a local variation, although this appears to have been a coastal phenomenon in South and West Norway. A particular local phenomenon in Hardanger is the vertical rock art panels with similar locations in the landscape, and with ship images, most are the square ship type. I have

suggested that these sites expressed social memory, or more precisely, the identity and history of the people who lived in this area. This is an essential part of local identity, and hence a local habitus. The location of all rock art sites in the study area in combination with the remaining archaeological material and the patterns I have identified, suggest that there was a great degree of local variation within the study area, in terms of location and rock art motifs.

In a maritime society where ships and the sea were crucial to everyday life, the ship was a powerful symbol, and the sites were thus potent places that functioned as meeting-places for the community. The sites were nodes along the coast, places where local identity, history, and cosmology were created, reaffirmed, and upheld. Rock art sites were thus a way of finding one's place and identity, and helped create a way of life and a habitus.

The archaeological record from the Bronze Age in West Norway has a great potential for further research and new knowledge. Both ceramics and lithic technology are interesting topics for future research. Future excavations will certainly provide more material for study, in addition to the existing record. New theoretical approaches could offer new insights to the Bronze Age in the study area and West Norway. Rock art has been a popular subject for research in recent years, and there is more to be learned by asking new questions and relating rock art to the social sphere. It is to be hoped that more research can be done to delve deeper into the subject of Bronze Age rock art in West Norway.

Summary

This thesis is a study of the location of rock art from the Bronze Age in Hardanger and Sunnhordland, West Norway. Although the main focus is on rock art, the sites cannot be considered in isolation, so other archaeological material from the Bronze Age has also been analysed: graves, settlement sites, hoards, and stray finds. The aims are as follows:

- To identify possible spatial and temporal patterns in the distribution of rock art sites, burials, settlements, and objects, and to discuss whether these patterns can tell us about life and the use of landscape in the study area in the Bronze Age.
- To discuss whether the patterns identified could indicate a west Norwegian or local identity and habitus.
- To discuss the interpretation of rock art based on the distribution and location of sites. Rock art is usually interpreted in terms of ritual and particularly fertility/sun worship within an agrarian interpretative framework. Did people living in west Norway in the Bronze Age have an agrarian worldview, or are there alternative interpretative frameworks?

The theoretical basis is Bourdieu's theory of practice. The archaeological material is analysed from three perspectives: the temporal, the social, and the spatial spheres. Rock art was made within a religious or ritual context, but it was also made within a social context, and as such the sites and images influence and affect the community.

In chapter two, I reviewed the history of research on the Bronze Age in West Norway, before moving on to rock art research. The focus here is on interpretations of rock art as ritual and cosmological and in relation to location.

In chapter three, the theoretical basis for this thesis and the methodology were discussed. A discussion of landscape was the starting point for the chapter, where landscape was defined as both cultural and natural. Landscape can encompass many things, from fields, houses, pastures, traditions and so on. I define landscape as an interaction between the natural and the cultural, encompassing subsistence, cosmology, rules and regulations, everyday activities and practice. The theoretical basis is Bourdieu's theory of practice, in particular the concept of the habitus, which is the way we think and act within the community. Memory is also considered

as part of the theoretical basis, i.e. social or collective memory and how it works. In terms of continuity and change, memory is interesting, because it refers to the material world, especially monuments. There was a past in prehistory, and this might contribute to identity and a sense of belonging within a community.

In chapter four, the archaeological material that forms the basis of this thesis was presented and discussed. Rock art sites and motifs, cairns, objects and settlements are sources to an increased understanding of Bronze Age life: cosmology, social practice, religious beliefs, and everyday life. I have taken a landscape approach to the archaeological material in that I argue that the landscape itself should be considered as an archaeological context. Landscape unites the various types of archaeological material, and it has an impact on the archaeological record, in that there is a dialectical relationship between landscape and materiality. People change their surroundings through clearing land, building houses and cairns, but the landscape also places physical constraints on activities within it. The objects that were included in the study were metal objects, flint daggers and stone axes. Other objects such as arrowheads and debitage were partially included, mainly because there is much material that has not been studied or dated, and this would be beyond the scope of this thesis. A larger study of stone axes as well as other stone objects would be very useful to anyone studying the Bronze Age.

In chapter five, I discussed the chronology of rock art in the study area, with a particular emphasis on the ship image and its chronology. The aim here was to establish a temporal framework for discussing rock art and possible changes or continuity in the material. By analysing the ship images and comparing them to recent results from Sweden, I was able to present a development of rock art production in the study area. The chronology of rock art is a tricky business, as there are few methods of absolute dating. I argued that shoreline displacement curves combined with comparisons with other areas was the best way of dating the rock art in the study area, producing a relative chronology. The production of rock art seems to start mainly in the middle of the Bronze Age, in period 3, while some images might be older. Rock art was made throughout the Late Bronze Age, particularly in period 5, and at some sites, rock art appears to have been made in the Early Iron Age. Cup mark sites are argued to be among the earliest rock art in the area, and should be dated primarily to the Late Neolithic and the Bronze Age. Hence, rock art was made over a long period in the study area.

Chapter six was an analysis of the archaeological material in terms of landscape location and spatial and temporal distribution. In order to determine whether there are patterns in the analysed material, the landscape in the study area was divided into three main zones. All archaeological categories are found in the three zones, but there were clear patterns in the spatial distribution. Rock art was concentrated to zone 2 and 3, while excavated and dated cairns were mainly found in zone 1 and 2. Interestingly, rock art on slabs are concentrated to zone 1 and 2, while rock art on solid rock are found in zone 2 and 3. This might indicate a different use of rock art within the study area, where rock art might have been used for instance in burials or in other contexts than rock art found further inland. Metal objects were concentrated to zone 1 and 2 in the Early Bronze Age, while the majority of Late Bronze Age objects was found in zone 3. Objects of stone are distributed throughout the study area, but stone axes in particular are concentrated in zone 3, in the inner Hardanger area. Likewise, flint daggers were found in all zones, but were found in smaller concentrations, especially in Etne and Rosendal. The objects, both in stone and bronze, are found near lines of communication and passages in the landscape. The earliest bronze objects are found mainly in zone 1 and 2, on the islands on the outer coast and the area surrounding the mouth of the Hardangerfjord. Some early bronzes are found in zone 3, however, and attest to the importance of mountain passages as well. Other archaeological categories confirm this tendency. Cairns are generally found on promontories and points throughout the study area, and seem to mark the entrances to bays, inlets, and fjords. There is thus a clear connection to water. This is also the case with the majority of figured rock art sites in the lowland, which are found close to the shore. Cup mark sites are concentrated to the mountain areas or outfields, far from the shore.

In chapter seven, the results of the analysis were interpreted within the theoretical framework set out in chapter three. The chapter started by defining a cosmological framework based on two main elements, water and stone, as an alternative to the established interpretation centred on sun-worship and fertility. Because rock art could have had several layers of meaning that were not necessarily the same in all parts of Scandinavia, it is argued that rock art and ship images in particular had differentiated meaning based on local practices. The sea is argued to have been important in cosmology and mythology, and ship images are thus related to rituals and beliefs involving water and the sea. The ship was a central symbol in the Bronze Age, as indicated by ship images, stone settings shaped like ships, or burials containing ships as coffins. It is argued that figurative rock art in West Norway is based on a maritime way of life, with a maritime cosmology, due to the location of most sites at the water's edge, and the

dominance of ship images. This is supported by the location of cairns close to water, as well as maritime elements inside some cairns. Stone seems to have had cosmological and ritual significance as well. Like the sea, the mountains can be associated with spirits, and the rock might have been perceived as a membrane to a spirit world. Hoards are often found in cracks or near large boulders, or in-between rocks in screes. Similarly, cup mark sites are generally found in the mountains, on stones and boulders. The location could indicate that cup marks and hoards were used to communicate with perceived powers in the mountains. Another aspect of rock art, hoards, and cairns is social memory, and this is explored in three small case studies. For each category, long traditions and continuity can be discerned. The vertical rock art panels found in Hardanger are of particular interest, as they have a specific location close to water, and the panels were made on cliffs and hills that have certain properties in common. The images are mainly ships, most are the square type of ship dated to the Early Bronze Age, and there is a clear pattern of continuity at these sites. Continuity and re-use is evident in the case of cairns as well. The location of cup marks and some sites with ring motifs is related to pastoralism and the use of the mountains for pasture. There is a certain correlation between economic expansion in the course of the Bronze Age and rock art production, which increase markedly in the Late Bronze Age. However, it is argued that a maritime ideology and cosmology existed in the study area in the Bronze Age, which does not preclude the importance of the mountains both cosmologically and economically. Maritime interaction could have featured networks, rituals, and activities related to the shore, sea journeys, and deep-sea fishing. The shore is an area of social interaction and negotiation, a place where one potentially could meet strangers, where ships arrived or departed. As such the rock art sites near the shore could be related to such activities and functioned as meeting-places, perhaps as neutral territory, where rituals were performed.

Both the bronzes and the rock art, especially the early ship images, indicate that the area was not an isolated outpost, rather, impulses and trends that are found in the rest of Southern Scandinavia are also found here. But, those impulses might not have been expressed in the same way as in for instance Denmark. The concentration of certain local idiosyncrasies such as the vertical rock art panels and the square ship, have been interpreted as local occurrences and might therefore point to a local identity. This local identity might indicate a different and local habitus, compared to other parts of Southern Scandinavia.

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Appendices

Appendix A: Rock art sites in Hardanger and Sunnhordland

The rock art sites in the study area are presented in alphabetical and numerical order. The information is based on information from reports in the archives at Bergen Museum, the Askeladden database, Per Fett's publications, Mandt Larsen 1972, and my own observations. It should be noted that in some cases there is little information about a site, especially cup mark sites that have been discovered in recent years. None of these have been published, and some new sites and panels have not been fully documented and verified. That is a project for the future, and I have included them in the catalogue for future reference. Since 1972, 72 new panels have been discovered, that is a 31% increase; many at previously known sites, but new sites have been discovered as well, mainly in Ullensvang. Gro Mandt's 1972 publication is the only comprehensive survey of the rock art in the study area. Some figurative sites discovered in recent years have been published in Mandt and Lødøen 2005.

Below, a specific set of information is provided for each site and panel. RA ID no refers to the identification number in the Askeladden database. Some panels do not have a number, as they no longer exist. FK no refers to Per Fett's numerical ordering of sites in his booklets. The number of figures and types of motif are mentioned. Descriptions of the panels are given where possible and appropriate. Literature references are given where available, these are preferably to published papers and books, but in some cases references to unpublished MA-theses are given. Documentation refers to when the sites were first documented and by whom, for some sites I have not been able to find any information. The reports are available in the topographical archives at Bergen Museum, and are not included in the list of references.

Note: Aga 8 cannot be found in the Askeladden database. It is likely that this is the panel at Klokkesteinviki, so I have chosen to name this panel Aga 8.

Unless otherwise stated, measurements are given in this order: Length x width x height.

Abbreviations:

STA – Stone Age

BA – Bronze Age

EBA – Early Bronze Age

LBA – Late Bronze Age

IA – Iron Age

PRIA – Pre-Roman Iron Age

EIA – Early Iron Age

Aga 1

Farm	Aga
Municipality	Ullensvang
RA ID no	101348-1
FK no	12
M.a.s.l.	12
Date	BA
Landscape zone	3
Figures	1
Motif	One concentric ring
Description	One ring motif on a small, flat, and sloping quartzite outcrop, L: 2 m, H: 1 m. The ring is lightly pecked and is hard to see unless the light is at an angle. There used to be a spring behind the rock, but this is now filled in. Some faint pecking marks to the left of the ring.
Location	Located at Aga, in a place known as Vikane, close to the modern road. The terrain slopes down to the sea, which now is about 60-70 metres from the site. A low outcrop that faces the fjord.
Documentation	Bakka 1955; Mandt Larsen 1967
Literature	Mandt Larsen 1972

Aga 2

Farm	Aga
Municipality	Ullensvang
RA ID no	101347
FK no	13
M.a.s.l.	100
Date	BA-IA
Landscape zone	3
Figures	10-12
Motif	10-12 cup marks
Description	Large boulder
Location	On a slope above the houses at Aga, there was a boulder that was blown up in 1969.
Documentation	Bakka 1955

Literature Bakka 1963; Mandt Larsen 1972

Aga 3

Farm Aga

Municipality Ullensvang

RA ID no 127261-1

FK no ---

M.a.s.l. c.30

Date BA-IA

Landscape zone 3

Figures 2

Motif 2 cup marks

Description Rectangular slab

Location A slab next to Isaksstova at Aga, used as a bench. No provenance.

Documentation Adriansen 1996

Literature ---

Aga 4

Farm Aga

Municipality Ullensvang

RA ID no 127262-1

FK no ---

M.a.s.l. 172

Date BA-IA

Landscape zone 3

Figures 3-4

Motif 3-4 cup marks

Description Large boulder with 3 or 4 cup marks on top.

Location On the mountainside, in an area where landslides are common.

Documentation Adriansen 1996

Literature ---

Aga 5

Farm	Aga
Municipality	Ullensvang
RA ID no	127263-1
FK no	---
M.a.s.l.	31
Date	BA-IA
Landscape zone	3
Figures	1
Motif	1 cup mark
Description	Flat slab, some cracks.
Location	A large slab in front of the door of Jostova, a house at Agatunet. No provenance
Documentation	Adriansen 1996
Literature	---

Aga 6

Farm	Aga
Municipality	Ullensvang
RA ID no	127263-2
FK no	---
M.a.s.l.	31
Date	BA-IA
Landscape zone	3
Figures	3-4
Motif	3-4 cup marks
Description	A rectangular slab, some exfoliation. The cup marks are clustered in the southern corner.
Location	The slab is found to the right of the entrance to Jostova, a house at Agatunet. No provenance.
Documentation	Adriansen 1996
Literature	---

Aga 7

Farm	Aga
Municipality	Ullensvang
RA ID no	130858-1
FK no	---
M.a.s.l.	121
Date	BA-IA
Landscape zone	3
Figures	13
Motif	13 cup marks
Description	A small stone (100x95x13 cm) with 13 cup marks.
Location	The stone is located in outfield at Brattestien, now found in a clearance cairn, to which it was moved in the 1920s. It was probably located in this area before being placed in the cairn. No provenance.
Documentation	Adriansen 1996
Literature	---

Aga 8

Farm	Aga
Municipality	Ullensvang
RA ID no	127260-1
FK no	---
M.a.s.l.	3
Date	IA
Landscape zone	3
Figures	40-50
Motif	40-50 cup marks
Description	The boulder is large (2.9 x 1.7 x 2 m) and emits a bell-like sound when struck, hence the name Klokkesteinen (Eng. The Bell stone). The cup marks are formed by people beating on the rock, and could be relatively recent. The location 3 M.a.s.l. indicates a late date, possibly Iron Age or more recent.
Location	A large boulder on a rock outcrop on the shore, about 10 metres from the sea, in Klokkesteinviki, a small bay N of Agatunet. The boulder is called "Klokkesteinen" and there are orchards nearby. Note: this panel is referred to as Klokkesteinviki in the Askeladden database. As the site belongs to Aga, I have named it Aga 8.

Documentation Adriansen 1996

Literature ---

Aga 9

Farm Aga

Municipality Ullensvang

RA ID no 130859-1

FK no ---

M.a.s.l. 28

Date BA-IA

Landscape zone 3

Figures 1-2

Motif 1-2 cup marks

Description A large slab, length 150 cm.

Location The cup marks are found on a slab that is used as a bench next to a barn, Jakobsløa. No provenance.

Documentation Adriansen 1996

Literature ---

Aga 10

Farm Aga

Municipality Ullensvang

RA ID no 130859-2

FK no ---

M.a.s.l. 28

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 possible cup mark

Description On a stone/slab next to the barn.

Location The panel is found on a stone next to the barn, possibly placed there after the barn was built. No provenance.

Documentation Adriansen 1996

Literature ---

Aga 11

Farm Aga

Municipality Ullensvang

RA ID no 130860-1

FK no ---

M.a.s.l. 690

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description Small stone, 210x15x35 cm.

Location The panel is found on a stone located in a scree. A disused path crosses the area, and there is a rock shelter 40 metres W of the panel.

Documentation Adriansen 1996

Literature ---

Bakke 1

Farm Bakke

Municipality Jondal

RA ID no 105587-1

FK no 1/1

M.a.s.l. 40-50

Date EBA-IA

Landscape zone 2

Figures 123

Motif 33 ships, 10 rings including 5 concentric rings, 2 U-shapes, 1 square, 31 cup marks, 8 footprints, 1 possible animal (canine?), 17 anthropomorphic figures, unidentifiable fragments. Some lines are uncertain and have not been given numbers. Thus there were more than 123 figures on the panel.

Description The images are found mainly on the lower half of the outcrop, which is oblong. There are many large cracks and glacial striation. The rock is severely eroded, as the images are not deeply carved, they are difficult to see. Most images on

the lower half have been painted. The images on the top half of the rock are recent discoveries. The rock is severely eroded here, and the images are very faint, the ships are almost impossible to see unless the light is slanted. Some of the images form scenes, especially a large ship and anthropomorphic figures, as well as a row of anthropomorphic figures. A series of concentric rings appears to be ordered. The type of ship ranges from ships that can be dated to period 3 to ships that are dated to the Early Iron Age.

Location Located in Herand, in a place called Kalhagen just below the modern road. There is much vegetation as well as modern houses that partially block the view to the fjord. The rock outcrop is known as "Mariskarvet".

Documentation De Lange 1912; Bøe 1925, 1932; Bakka and Mandt Larsen 1969

Literature Mandt Larsen 1972

Bakke 2

Farm Bakke

Municipality Jondal

RA ID no 105587-2

FK no 1/2

M.a.s.l. 40-50

Date BA, period 3-4

Landscape zone 2

Figures 1

Motif One ship, double-lined with crew strokes.

Description The ship is found on the top of the outcrop, near the edge. The rock is eroded, but the image is clearly visible.

Location Located in Herand, in a place called Kalhagen just below the modern road. There is much vegetation as well as modern houses that partially block the view to the fjord. The rock outcrop is called Kleiven and is located next to the road. There are three panels on the outcrop, panels 2, 3 and 6.

Documentation Bøe 1925, 1932; Mandt Larsen 1967

Literature Mandt Larsen 1972

Bakke 3

Farm Bakke

Municipality Jondal

RA ID no 105587-3

FK no 1/3

M.a.s.l. 40-50

Date BA, period 2/3-4

Landscape zone 2

Figures 35

Motif 3 ships, 7 anthropomorphs, 3 cup marks, 1 footprint, 1 oval, unidentifiable/fragmentary lines. There are at least 35 figures, but not all images have been described and recent tracings have not yet been photographed and made available.

Description The panel is almost vertical, and flat on top. The images are found both on the vertical and horizontal surfaces. The rock is eroded and only a few images are clearly visible, some have been painted. The anthropomorphic figures form a "procession".

Location Located in Herand, in a place called Kalhagen just below the modern road. There is much vegetation as well as modern houses that partially block the view to the fjord. The rock outcrop is called Kleiven and is located next to the road. There are three panels on the outcrop, panels 2, 3 and 6.

Documentation Bøe 1925, 1932; Gjerde 2001

Literature Mandt Larsen 1972

Bakke 4

Farm Bakke

Municipality Jondal

RA ID no 105587-4

FK no 1/4

M.a.s.l. 40-50

Date BA-IA

Landscape zone 2

Figures 21

Motif 21 cup marks

Description An outcrop between Bakke 3 and the road, it was eroded and covered by soil

when Bøe documented it.

Location Located in Herand, in a place called Kalhagen just below the modern road. There is much vegetation as well as modern houses that partially block the view to the fjord. The panel has not been found since it was first described by Bøe, and is assumed to lie buried under the modern road.

Documentation Bøe 1925

Literature Mandt Larsen 1972

Bakke 6

Farm Bakke

Municipality Jondal

RA ID no 105587-6

FK no ---

M.a.s.l. 40-50

Date BA, period 3

Landscape zone 2

Figures 1

Motif 1 ship

Description The ship is found near the foot of the outcrop. The rock is eroded and cracked, and a crack is partially integrated in the keel.

Location Located in Herand, in a place called Kalhagen just below the modern road. There is much vegetation as well as modern houses that partially block the view to the fjord. The rock outcrop is called Kleiven and is located next to the road. There are three panels on the outcrop, panels 2, 3 and 6. Note: panel 5 consisted of a few lines that were later determined to be natural.

Documentation Gjerde 2001; Gundersen 2005

Berge 1

Farm Berge

Municipality Kvam

RA ID no 105677-1

FK no ---

M.a.s.l. 7-8

Date BA

Landscape zone 2

Figures approx 110

Motif 37 ships plus several fragments that are likely to be ships, 4 concentric rings, 4 rings with four radii, 11 rings, 2 rings with vertical groove, 1 spiral, 9 cup marks

Description Vertical panel. The rock is very eroded and the images are thus difficult to see unless the light slants on to the panel.

Location At the foot of "Fløyen", a small hill, close to the farm houses and about 30 metres from the road. Good view of the fjord.

Documentation

Literature Gjerde 1998, 2002; Mandt & Lødøen 2005; Wrigglesworth 2006.

Bratt-Espe 1

Farm Bratt-Espe

Municipality Ullensvang

RA ID no 101616-1

FK no 3

M.a.s.l. 650

Date BA-IA

Landscape zone 3

Figures 20

Motif 20 cup marks

Description The cup marks are found spread on a rock outcrop. Some are clustered in a small group

Location At Fitjasete, a summer farm belonging to Bratt-Espe. The images are located on a rock outcrop, where a farm building is located as well. The images are found at the SW corner of the building.

Documentation Bakka 1955

Literature Bakka 1963

Børve 1

Farm Nedre Børve

Municipality Ullensvang

RA ID no 101535-1

FK no 13

M.a.s.l. 80
Date BA, period 6-EIA
Landscape zone 3
Figures 1
Motif 1 ship
Description The image is found on a small vertical panel, facing the farm. The ship is lightly pecked, the keel is parallel to the layers of the rock. The image was not found in 2004, it has not been seen by the locals in years.
Location At Skori, close to the old path from the farm to the sea, on a small outcrop. Nedre Børve is located 110
Documentation Bakka 1951; Adriansen 1997; Gundersen 2004
Literature Bakka 1963; Mandt Larsen 1972

Børve 2

Farm Øvre Børve
Municipality Ullensvang
RA ID no 101591-1
FK no 4
M.a.s.l. 560
Date BA
Landscape zone 3
Figures 44
Motif At least 44 foot prints.
Description A horizontal, round stone, quartzite, white. The foot prints fill the entire surface, and there is some superposition. The lines are shallow but clear against the white background.
Location A flat rock in the path from the farm up to the summer farm, at Lauvås, about 560 M.a.s.l..
Documentation Slomann 1948, Fett 1951, Bakka 1954, Nyland and Handeland 2003; Gundersen 2004
Literature Bakka 1963; Mandt Larsen 1972

Børve 3

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101580-1

FK no 5

M.a.s.l. 779

Date BA-IA

Landscape zone 3

Figures 60

Motif 60 cup marks

Description The rock is eroded. The cup marks are found on a panel facing E, and are found in several groups, including six cup marks in a ring around a central cup mark, five cup marks forming an oval, and two parallel lines.

Location At Dusen, sloping and boggy terrain, about 100 metres from Bjørnstøl summer farm and below the path. There are three outcrops with cup marks here, Børve 3, 7, and 8.

Documentation Fett 1951; Adriansen 1997

Literature Bakka 1963; Mandt Larsen 1972

Børve 4

Farm Øvre Børve

Municipality Ullensvang

RA ID no 131031

FK no 15

M.a.s.l. 250

Date BA-IA

Landscape zone 3

Figures 82-107

Motif 82-107 cup marks

Description The cup marks are spread over a distance of 50 metres on the outcrop, in four groups, A-D. These have been given separate id-numbers in Askeladden database: 131031-1-4. For the sake of simplicity they are given as one here. Part A (131031-1): 46-51 cup marks. Part B (131031-2): 6-7 cup marks. Part C (131031-3): 14-22 cup marks. Part D (131031-4): 15-24 cup marks.

Location A low ridge at the top of a steep slope above the farm, the location is known as Haugen and is the western demarcation of "Utitud". There are two barrows on

top of the outcrop, and there might be cup marks underneath.

Documentation Bakka 1954; Adriansen 1997

Literature Bakka 1963; Mandt Larsen 1972

Børve 5

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101581-1

FK no 16

M.a.s.l. 237

Date BA-IA

Landscape zone 3

Figures 10

Motif 10 cup marks (7 cup marks according to Adriansen 1997)

Description The rock is eroded and cracked, there are many natural depressions so that distinguishing artificial cup marks from natural ones can be difficult.

Location A boulder called "Storesteinen", 600 x 400 x 350 cm, located near the edge of a slope, about 250 metres N of "Utitudun" at a place called Tveitane.

Documentation Bakka 1954; Adriansen 1997

Literature Bakka 1963; Mandt Larsen 1972

Børve 6

Farm Øvre Børve

Municipality Ullensvang

RA ID no 131014

FK no 17

M.a.s.l. 250

Date BA-IA

Landscape zone 3

Figures 6-11

Motif 6-11 cup marks

Description There are several round depressions on the outcrop, only one is certain. In recent times someone has drilled a hole in the bottom of the cup mark.

Location On a large rock outcrop in front of the farm house at "Innitun", the outcrop ends in a drop. The place is known as Bershaugen. The cup mark is found near the edge of the outcrop.

Documentation Bakka 1954; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Børve 7

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101593-1

FK no 6/2

M.a.s.l. 800

Date BA-IA

Landscape zone 3

Figures 14

Motif 14 cup marks

Description The images are found on the top of the stone. Some erosion, but the cup marks are clear.

Location At Dusen, about 100 metres up the slope from Børve

Documentation Bakka 1954

Literature Mandt Larsen 1972

Børve 8

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101595-1

FK no 6/1

M.a.s.l. 700

Date BA-IA

Landscape zone 3

Figures 8-10

Motif 8-10 cup marks

Description Some erosion, but the cup marks are clear.

Location 200 metres south of Børve 3 at Dusen. A brook close by.
Documentation Bakka 1954
Literature Mandt Larsen 1972

Børve 9

Farm Øvre Børve
Municipality Ullensvang
RA ID no 101583-1
FK no 18/2
M.a.s.l. 700
Date BA-IA
Landscape zone 3
Figures 39
Motif 39 cup marks
Description A large, flat stone, almost triangular, 170 x 145 x 65 cm, with cup marks on top.
Location At Stegasteinen, a grassy and stony area that takes its name from the Stegasteinen boulder, N and NE of Dusen. The road up to the mountains crosses the area. There are seven stones with cup marks in this area, Børve 9-14, 32. Børve 9 is located 75 metres S of Stegasteinen.
Documentation Bakka 1954; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Børve 10

Farm Øvre Børve
Municipality Ullensvang
RA ID no 101583-7
FK no 18/3
M.a.s.l. 700
Date BA-IA
Landscape zone 3
Figures 5
Motif 5 cup marks

Description A large boulder, 820-330 x 130 x 80 cm eroded, with five cup marks in groups of two and three. According to Askeladden database, there are 6-10 cup marks here.

Location At Stegasteinen, a grassy and stony area that takes its name from the Stegasteinen boulder, N and NE of Dusen. The road up to the mountains crosses the area. There are seven stones with cup marks in this area, Børve 9-14, 32. Børve 10 is located 4 metres E of Børve 9.

Documentation Bakka 1954; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Børve 11

Farm Øvre Børve

Municipality Ullensvang

RA ID no 130932-1

FK no 18/1

M.a.s.l. 700

Date BA-IA

Landscape zone 3

Figures 53-63

Motif 53-63 cup marks

Description The cup marks are found on top of the large boulder Stegasteinen. The images are found in groups or alone.

Location At Stegasteinen, a grassy and stony area that takes its name from the Stegasteinen boulder, N and NE of Dusen. The road up to the mountains crosses the area. There are seven stones with cup marks in this area, Børve 9-14, 32. Børve 11 is located on the Stegasteinen, which is flat on top and measures 900 x 800 x 240-260 cm.

Documentation Bakka 1954; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Børve 12

Farm Øvre Børve

Municipality Ullensvang

RA ID no 130932-2

FK no 18/4

M.a.s.l. 700
Date BA-IA
Landscape zone 3
Figures 2
Motif 2 cup marks
Description Boulder, 380 x 300 cm.
Location At Stegasteinen, a grassy and stony area that takes its name from the Stegasteinen boulder, N and NE of Dusen. The road up to the mountains crosses the area. There are seven stones with cup marks in this area, Børve 9-14, 32. Børve 12 is located 2 metres S of Stegasteinen.
Documentation Bakka 1954; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Børve 13

Farm Øvre Børve
Municipality Ullensvang
RA ID no 130932-3
FK no 18/5
M.a.s.l. 700
Date BA-IA
Landscape zone 3
Figures 1
Motif 1 cup mark
Description Flat, rectangular stone, 210-230 x 75 x 7-30 cm.
Location At Stegasteinen, a grassy and stony area that takes its name from the Stegasteinen boulder, N and NE of Dusen. The road up to the mountains crosses the area. There are seven stones with cup marks in this area, Børve 9-14, 32. Børve 13 is located 3 metres W of Stegasteinen.
Documentation Bakka 1954; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Børve 14

Farm Øvre Børve

Municipality Ullensvang

RA ID no 130932-4

FK no 18/6

M.a.s.l. 700

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 large cup mark

Description Boulder, 350 x 240 x 40-100 cm

Location At Stegasteinen, a grassy and stony area that takes its name from the Stegasteinen boulder, N and NE of Dusen. The road up to the mountains crosses the area. There are seven stones with cup marks in this area, Børve 9-14, 32. Børve 14 is located 0 metres SW of Stegasteinen.

Documentation Bakka 1954; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Børve 15

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101585-1

FK no 19

M.a.s.l. 300

Date BA-IA

Landscape zone 3

Figures 21

Motif 1 ring with cup mark in the centre and 20 cup marks

Description The images are found on the top of the outcrop, where the rock is even.

Location At Kråkeflot, a terrace about 1 km S of the houses at Øvre Børve.

Documentation Bakka 1955; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Børve 16

Farm	Øvre Børve
Municipality	Ullensvang
RA ID no	101553-1
FK no	20/1
M.a.s.l.	800
Date	BA-IA
Landscape zone	3
Figures	4
Motif	4 cup marks
Description	Small, low stone, triangular.
Location	Basaldfloten, a terrace about 800 m.a.s.l. There are four stones with cup marks here, near the road between Truberg and Gunnhildsstølen: Børve 16-19.
Documentation	Bakka 1955; Adriansen 1996
Literature	Mandt Larsen 1972

Børve 17

Farm	Øvre Børve
Municipality	Ullensvang
RA ID no	101553
FK no	20/2
M.a.s.l.	800
Date	BA-IA
Landscape zone	3
Figures	2
Motif	2 cup marks
Description	Small stone - it was not found in 1996.
Location	Basaldfloten, a terrace about 800 m.a.s.l. There are four stones with cup marks here, near the road between Truberg and Gunnhildsstølen: Børve 16-19. Børve 17 is located 3 metres NNE of panel 16.
Documentation	Bakka 1955; Adriansen 1996
Literature	Bakka 1963; Mandt Larsen 1972

Børve 18

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101553-5

FK no 30/3

M.a.s.l. 800

Date BA-IA

Landscape zone 3

Figures 7

Motif 7 cup marks

Description Boulder, flat on top. The cup marks are small

Location Basaldfloten, a terrace about 800 m.a.s.l. There are four stones with cup marks here, near the road between Truberg and Gunnhildsstølen: Børve 16-19. The panel is located 15 m S of panel 16.

Documentation Bakka 1955; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Børve 19

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101553

FK no 20/4

M.a.s.l. 800

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description Small stone - it was not found in 1996

Location Basaldfloten, a terrace about 800 m.a.s.l. There are four stones with cup marks here, near the road between Truberg and Gunnhildsstølen: Børve 16-19. Located 8 metres NW of panel 18.

Documentation Bakka 1955; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Børve 20

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101587-1

FK no 21/1

M.a.s.l. 809

Date BA-IA

Landscape zone 3

Figures 9

Motif 9 cup marks

Description Square, flat and horizontal stone, 110 x 60-100 cm. The images are found on top.

Location At Gunnhildstøl, a terrace around 800-850 m.a.s.l., near the road between Truberg and Klepp. Rocky pasture. There is a brook. There are three stones with cup marks here, Børve 20-22. Børve 20 is located about 25 metres from the edge of the terrace, just above the road

Documentation Bakka 1955; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Børve 21

Farm Øvre Børve

Municipality Ullensvang

RA ID no 130967-1

FK no 21/2

M.a.s.l. 822

Date BA-IA

Landscape zone 3

Figures 4-5

Motif 4-5 cup marks

Description Large, horizontal stone, flat on top, where the cup marks are found, 180x160 x 25-70 cm.

Location At Gunnhildstøl, a terrace around 800-850 m.a.s.l., near the road between Truberg and Klepp. Rocky pasture. There is a brook. There are three stones with cup marks here, Børve 20-22. Børve 21 is located about 50 metres NE

from panel 20.

Documentation Bakka 1955; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Børve 22

Farm Øvre Børve
Municipality Ullensvang
RA ID no 130968-1
FK no 21/3
M.a.s.l. 823
Date BA-IA

Landscape zone 3

Figures 3
Motif 3 cup marks

Description Large stone, slanting somewhat to the south, 280x200x0-55 cm.

Location At Gunnhildstøl, a terrace around 800-850 m.a.s.l., near the road between Truberg and Klepp. Rocky pasture. There is a brook. There are three stones with cup marks here, Børve 20-22. Børve 21 is located about 16 metres S from panel 21.

Documentation Bakka 1955; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Børve 23

Farm Øvre Børve
Municipality Ullensvang
RA ID no 101584-1
FK no 22/1
M.a.s.l. 900
Date BA-IA

Landscape zone 3

Figures 26
Motif 26 cup marks

Description A low, flat rock, 170 x 100 x 0-14 cm. The cup marks are in groups, two large

one in the south and three deep ones in the north, with the rest in-between.

Location At Klepp, an old summer farm that has not been used for as long as anyone can remember. The terrace is rocky and there are several remains of small buildings. There are five cup marked stones here.

Documentation Bakka 1955; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Børve 24

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101584-6

FK no 22/2

M.a.s.l. 900

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description Large boulder, 230 x 225 x 15-40 cm, the cup mark is located in the centre.

Location At Klepp, an old summer farm that has not been used for as long as anyone can remember. The terrace is rocky and there are several remains of small buildings. There are five cup marked stones here. Panel 24 is located on a boulder 1 metre S of panel 23.

Documentation Bakka 1955; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Børve 25

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101584-7

FK no 22/3

M.a.s.l. 900

Date BA-IA

Landscape zone 3

Figures 2

Motif 2 cup marks
Description Large boulder, 270 x 260 x 110 cm, the cup marks are found on top.
Location At Klepp, an old summer farm that has not been used for as long as anyone can remember. The terrace is rocky and there are several remains of small buildings. There are five cup marked stones here. Panel 24 is located on a boulder next to the boulder on which panel 23 is located.
Documentation Bakka 1955; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Børve 26

Farm Øvre Børve
Municipality Ullensvang
RA ID no 101584-8
FK no 22/4
M.a.s.l. 900
Date BA-IA
Landscape zone 3
Figures 3
Motif 3 cup marks
Description Large boulder, 260 x 160 x 50 cm, with a flatter area in the SW, where the cup marks are found.
Location At Klepp, an old summer farm that has not been used for as long as anyone can remember. The terrace is rocky and there are several remains of small buildings. There are five cup marked stones here. Panel 26 is located on a boulder 4 metre N of panel 25.
Documentation Bakka 1955; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Børve 27

Farm Øvre Børve
Municipality Ullensvang
RA ID no 101584-9
FK no 22/5
M.a.s.l. 900

Date BA-IA
Landscape zone 3
Figures 3
Motif 3 cup marks
Description Large boulder, 360 x 290 x 100 cm, flat on top, where the cup marks are found
Location At Klepp, an old summer farm that has not been used for as long as anyone can remember. The terrace is rocky and there are several remains of small buildings. There are five cup marked stones here. Panel 26 is located on a boulder 13 metres SW of panel 25.
Documentation Bakka 1955; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Børve 28

Farm Øvre Børve
Municipality Ullensvang
RA ID no 101589-1
FK no 23
M.a.s.l. 404
Date BA-IA
Landscape zone 3
Figures 15
Motif 15 cup marks
Description Large boulder, 260x200x70 cm.
Location At Litlehagen, a rocky terrace, good pasture. The path to Tveiti, a summer farm, crosses the terrace. About 200-300 metres S of the summer farm, on the western side of the path, there is a large boulder with cup marks. Børve 29-31 are found close by.
Documentation Bakka 1955; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Børve 29

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101589-2

FK no ---

M.a.s.l. 404

Date BA-IA

Landscape zone 3

Figures 17-21

Motif 17-21 cup marks

Description Large boulder, 330 x250 x 100 cm

Location At Litlehagen, a rocky terrace, good pasture. The path to Tveiti, a summer farm, crosses the terrace. About 200-300 metres S of the summer farm, on the western side of the path, there is a large boulder with cup marks. Børve 28-31 are found close by.

Documentation Adriansen 1996

Børve 30

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101589-3

FK no ---

M.a.s.l. 404

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 possible cup mark

Description Large boulder, 140 x 100 x 30-40 cm

Location At Litlehagen, a rocky terrace, good pasture. The path to Tveiti, a summer farm, crosses the terrace. About 200-300 metres S of the summer farm, on the western side of the path, there is a large boulder with a cup mark. Børve 28-31 are found close by.

Documentation Adriansen 1996

Børve 31

Farm Øvre Børve

Municipality Ullensvang

RA ID no 101589-4

FK no ---

M.a.s.l. 404

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description Large boulder, 310 x 170 x 40-111 cm

Location At Litlehagen, a rocky terrace, good pasture. The path to Tveiti, a summer farm, crosses the terrace. About 200-300 metres S of the summer farm, on the western side of the path, there is a large boulder with a cup mark. Børve 28-30 are found close by.

Documentation Adriansen 1996

Børve 32

Farm Øvre Børve

Municipality Ullensvang

RA ID no 130932-5

FK no ---

M.a.s.l. 700

Date BA-IA

Landscape zone 3

Figures 3-4

Motif 3-4 cup marks

Description A small stone found in a stone wall.

Location At Stegasteinen, a grassy and stony area that takes its name from the Stegasteinen boulder, N and NE of Dusen. The road up to the mountains crosses the area. The panel is located in a stone wall that crosses the slope, there is no provenance. There are seven stones with cup marks in this area, Børve 9-14, 32.

Documentation Adriansen 1996

Børve 33

Farm Øvre Børve

Municipality Ullensvang

RA ID no 130979-1

FK no ---

M.a.s.l. 910

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description Small stone, 125x100 cm

Location At Klepp, an old summer farm, 40-50 metres from Børve 23-27.

Documentation Adriansen 1996

Børve 34

Farm Øvre Børve

Municipality Ullensvang

RA ID no 131012-1

FK no ---

M.a.s.l. ---

Date BA-IA

Landscape zone 3

Figures 5-9

Motif 5-9 cup marks

Description A large slab, 1.34 metres long set on top of some bricks

Location The slab is used as a bench and is located next to the farm house at Innitun. No provenance.

Documentation Adriansen 1996

Børve 35

Farm Øvre Børve

Municipality Ullensvang

RA ID no 131013-1

FK no ---

M.a.s.l. 300

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description Rock outcrop

Location The cup mark is found on a rock outcrop in a clearing on a terrace at Kråkeflot, which is used as pasture for bulls, close to the farm yard, and about 22 metres S of Børve 15.

Documentation Adriansen 1996

Børve 36

Farm Øvre Børve

Municipality Ullensvang

RA ID no 131016-1

FK no ---

M.a.s.l. 775

Date BA-IA

Landscape zone 3

Figures 64

Motif 64 cup marks

Description A large boulder with at least 64 cup marks. This panel has been surveyed, but needs more documentation.

Location The boulder is located just E of Bleikaberg and a few hundred metres S of the river Børve.

Documentation Adriansen 1997

Børve 37

Farm Øvre Børve

Municipality Ullensvang

RA ID no 131019-1

FK no ---

M.a.s.l. 763

Date BA-IA

Landscape zone 3

Figures 19

Motif 19 cup marks

Description A boulder with 19 cup marks. This panel has been surveyed, but needs more documentation.

Location The boulder is located just E of Bleikaberg and a few hundred metres S of the river Børve.

Documentation Adriansen 1997

Børve 38

Farm Øvre Børve

Municipality Ullensvang

RA ID no 131020-1

FK no ---

M.a.s.l. 761

Date BA-IA

Landscape zone 3

Figures 60

Motif 60 cup marks

Description A boulder with 60 cup marks. This panel has been surveyed, but needs more documentation.

Location The boulder is located just E of Bleikaberg and a few hundred metres S of the river Børve.

Documentation Adriansen 1997

Fitja 1

Farm	Fitja
Municipality	Etne
RA ID no	113508-1
FK no	5
M.a.s.l.	85
Date	BA
Landscape zone	2
Figures	4
Motif	4 concentric rings, some parallel grooves could be a fragment of a ship
Description	---
Location	The panel is found on a low outcrop at Austre Dynjadn, on a slope. The area is densely forested today and has not been found in recent surveys
Documentation	Bakka 1958, Mandt Larsen 1966, Gjerde 1997
Literature	Mandt Larsen 1972; Vevatne 1996

Fjøsna 1

Farm	Fjøsna
Municipality	Etne
RA ID no	90162-1
FK no	1/1
M.a.s.l.	10-15
Date	BA, period 3-4
Landscape zone	2
Figures	13
Motif	3 rings, 1 concentric ring, 1 fragment of concentric ring, 1 cup mark, 4 ships, 3 foot prints.
Description	The images are found in two groups. They are lightly pecked and hard to see.
Location	At Fjøsneset promontory there are five panels on outcrops close to the sea. The registration no in the Askeladden database refers to all five panels
Documentation	Bøe 1923, Bakka 1966, Bakka and Mandt Larsen 1969, Gjerde 1997
Literature	Mandt Larsen 1972; Vevatne 1996

Fjøsna 2

Farm	Fjøsna
Municipality	Etne
RA ID no	90162-1
FK no	1/2
M.a.s.l.	10-15
Date	BA, period 1-4/5
Landscape zone 2	
Figures	15
Motif	1 oval, 10 ships, 4 fragments of ships, unidentifiable grooves.
Description	The images are spread from the top of the outcrop to the foot. The oldest ships are located near the top and in the middle of the panel.
Location	At Fjøsnaeset promontory there are five panels on outcrops close to the sea. The registration no in the Askeladden database refers to all five panels
Documentation	Shetelig 1924, Bøe 1932, Bakka and Mandt Larsen 1966
Literature	Mandt Larsen 1972; Vevatne 1996

Fjøsna 3

Farm	Fjøsna
Municipality	Etne
RA ID no	90162-1
FK no	1/3
M.a.s.l.	10-15
Date	BA, period 3-4
Landscape zone 2	
Figures	1
Motif	1 ship
Description	On top of an outcrop on a flat surface.
Location	At Fjøsnaeset promontory there are five panels on outcrops close to the sea. The registration no in the Askeladden database refers to all five panels
Documentation	Bakka 1956; Bakka and Mandt Larsen 1966
Literature	Mandt Larsen 1972; Vevatne 1996

Fjøsna 4

Farm Fjøsna

Municipality Etne

RA ID no 90162-1

FK no 1/4

M.a.s.l. 10

Date LBA

Landscape zone 2

Figures 2

Motif 2 pairs of foot prints

Description On an almost flat surface, close to the road.

Location At Fjøsnaeset promontory there are five panels on outcrops close to the sea.
The registration no in the Askeladden database refers to all five panels

Documentation Bakka 1956, Bakka and Mandt 1966

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Fjøsna 5

Farm Fjøsna

Municipality Etne

RA ID no 90162-1

FK no 1/5

M.a.s.l. 6,17

Date LBA

Landscape zone 2

Figures 1

Motif 1 pair of foot prints

Description Horizontal outcrop.

Location At Fjøsnaeset promontory there are five panels on outcrops close to the sea.
The registration no in the Askeladden database refers to all five panels

Documentation Bakka 1956, Bakka and Mandt 1966

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Flote 1

Farm Flote

Municipality Etne

RA ID no 90158-1

FK no 1/1

M.a.s.l. 80

Date BA, period 3-6

Landscape zone 2

Figures 88

Motif 20 cup marks, 7 trees/plants, 11 ships, 3 anthropomorphic figure, 4 animals, 3 ovals, 1 u-shape, 5 spirals, 8 complex rings, 20 rings including concentric rings, 4 rings with radii, one square figure, 1 unidentifiable line figure.

Description The images are spread across the panel, which is eroded. The images are hard to see unless the light slants onto the rock.

Location Bruteigsteinen, a large boulder on a slope at Flote near the river. Visible from a large area around the Stordalsvatnet lake.

Documentation Bøe and Straume 1953, Mandt Larsen 1967; Fett 1964, Mandt and Hauge Riisøen 1996; Gjerde 1997

Literature Mandt Larsen 1972; Sør-Reime 1982; Vevatne 1996

Flote 2

Farm Flote

Municipality Etne

RA ID no ---

FK no 1/2

M.a.s.l. 80

Date BA-IA

Landscape zone 2

Figures 16

Motif 13 cup marks, plus 3 cup marks on a small slab

Description 13 cup marks plus one uncertain cup mark are found on the boulder, there was also a slab lying on top, there were 3 cup marks on it.

Location About 30 metres SW of the farm house at Flote, 120 metres W of Flote 1. Not found during survey in 1999.

Documentation Fett and Fett 1974, Marthinussen and Myhre 1985

Literature Mandt Larsen 1972; Sør-Reime 1982; Vevatne 1996

Flote 3

Farm Flote

Municipality Etne

RA ID no 90141-1

FK no ---

M.a.s.l. 75-80

Date BA-IA

Landscape zone 2

Figures 1

Motif at least 1 cup mark

Description Boulder

Location South of the old farm house, 120 metres W of Flote 1, on the northern edge of the morainic terrace.

Documentation Gjerde 2000

Fonnaland 1

Farm Fonnaland

Municipality Kvam

RA ID no 105653-1

FK no ---

M.a.s.l. 20

Date BA, period 3-6

Landscape zone 2

Figures 4

Motif Three ships and a horizontal line

Description The panel is vertical, with a slight slant. Several cracks in the rock, the ships cluster near a large diagonal crack. The rock is eroded and discoloured due to water seepage. The ships are arranged in a vertical row and in pairs, if the line is interpreted as a fragment of a ship.

Location On an outcrop at Fonnaland, next to a pedestrian path next to the main road. Good view to the fjord, although slightly obscured by modern houses and vegetation.

Documentation Nyland 2003
Literature Wrigglesworth 2006

Frøyenes 1

Farm Århus

Municipality Ullensvang

RA ID no 100874-1

FK no 2

M.a.s.l. 3

Date EIA

Landscape zone 3

Figures 9

Motif 7 cup marks and 2 concentric rings, both with a central cup mark.

Description A vertical rock outcrop that drops into the sea. Several cracks, there are veins of a lighter rock.

Location At Frøyenes, in a location called Kvednarauga, on a small promontory. The site is difficult to access from land as the rock is steep and there are only some narrow ledges to hold on to.

Documentation Bøe 1925, Mandt Larsen 1967, Nydal 2001

Literature Bendixen 1890; Reusch 1901; Bjørlykke 1909; Bakka 1963; Mandt Larsen 1972

Førde 1

Farm Førde

Municipality Sveio

RA ID no ---

FK no ---

M.a.s.l. ---

Date BA-IA

Landscape zone 1

Figures 1

Motif 1 cup mark

Description A small triangular stone, possibly grey marble. The cup mark is shallow.

Location Found near the shore at Vestervågen bay at Førde, Sveio. Now kept at Bergen Museum, B09663

Documentation ---

Literature Innselset 1995

Hagen 1

Farm Hagen

Municipality Odda

RA ID no ---

FK no 1

M.a.s.l. ---

Date LBA?

Landscape zone 3

Figures 1

Motif 1 foot print

Description Thin lines that are carved or cut rather than pecked. Marked toes, three transverse lines in the middle of the foot

Location The image is found on a small triangular stone that was found on the ground, 200 metres S of the barn, 4 metres E of a stone wall and 25 metres N of a spring, Storolekjelda. An old road passed through the area. No provenance. Now kept in the Bergen Museum, B-no. 10309

Documentation ---

Literature Bergen Museums Årbok 1951; Mandt Larsen 1972

Hallanger 1

Farm Hallanger

Municipality Ulvik

RA ID no ---

FK no 4

M.a.s.l. 10-20

Date BA-IA (IA?)

Landscape zone 3

Figures 15

Motif 9 lines, rounded or wavy, 1 ring, 5 ovals. Some of the lines end in rings.

Description The images are pecked, possibly with a sharp object. Some of the lines could perhaps be interpreted as snakes. However, these images are unique and there is little to compare them with. It is difficult to determine whether they are prehistoric or not.

Location On an outcrop next to the road between Hallanger and Vallvik, between two rivers. The terrain is steep.

Documentation Bakka 1953

Literature Mandt Larsen 1972

Halsnøy 1

Farm Halsnøy kloster

Municipality Kvinnherad

RA ID no 72965-1

FK no 13

M.a.s.l. ---

Date BA-IA

Landscape zone 2

Figures 59

Motif 4 foot prints and 55 cup marks

Description Spread across the slab

Location On a slab in the quay. No provenance

Documentation Bakka 1962

Literature Mandt Larsen 1972

Hamarhaug 1

Farm Hammarhaug

Municipality Kvinnherad

RA ID no 66363-1

FK no 3

M.a.s.l. 9

Date BA, period 3-6

Landscape zone 2

Figures 38

Motif 33 ships, 2 cup marks, two unidentifiable line motifs, 1 crescent-shaped motif, modern graffiti

Description The panel is vertical. Severe damage in places, large flakes have fallen off and thus some figures are fragmentary. Modern graffiti is also present.

Location Located at the foot of Husaberget, a large outcrop next to the modern road.

Documentation Bakka 1962, Mandt Larsen 1967

Literature Bakka 1962, Mandt Larsen 1972

Hansbu 1

Farm

Municipality Ullensvang

RA ID no 130623-1

FK no ---

M.a.s.l. 1200

Date BA-IA

Landscape zone 3

Figures 2

Motif 2 cup marks

Description Small stone, 1 m wide, 0.5 m tall. Coins were found in one of the cup marks.

Location On the Hardangervidda, in a boggy area W of Holmsbulægret and 200 m W of Hansbubekken brook.

Documentation

Haugen 1

Farm Haugen

Municipality Etne

RA ID no 90148-1

FK no 3

M.a.s.l. 15-20

Date BA-IA

Landscape zone 2

Figures 11

Motif 11 cup marks

Description The cup marks are found in an irregular row.
Location Next to the old farm house, which is partially built on the outcrop. The panel is found next to the steps up to the door and next to the road.
Documentation Straume 1956, Mandt Larsen 1966
Literature Mandt Larsen 1972; Vevatne 1996

Hauso 1

Farm Hauso
Municipality Ullensvang
RA ID no 101619-1
FK no 4/1
M.a.s.l. 300
Date BA-IA
Landscape zone 3
Figures 62-72
Motif 21 foot prints, 1 square, 40-50 cup marks
Description Horizontal stone, more or less flat, covered with the images.
Location On a terrace about 300 m.a.s.l., Hausatveiti. There are three panels here. Hauso 1 is located on the edge of the terrace.
Documentation Bakka 1955
Literature Bakka 1963; Mandt Larsen 1972

Hauso 2

Farm Hauso
Municipality Ullensvang
RA ID no 101619-4
FK no 4/2
M.a.s.l. 300
Date BA-IA
Landscape zone 3
Figures 17
Motif 17 cup marks
Description A low, flat stone/outcrop. The cup marks are spread on the panel, although

appear to concentrate on one side.

Location On a terrace about 300 m.a.s.l., Hausatveiti. There are three panels here. Hauso 2 is set back from the edge of the terrace, about 10 m south of panel 1.

Documentation Bakka 1955

Literature Bakka 1963; Mandt Larsen 1972

Hauso 3

Farm Hauso

Municipality Ullensvang

RA ID no 101619-5

FK no 4/3

M.a.s.l. 300

Date LBA-IA

Landscape zone 3

Figures 25

Motif 3 foot prints, 22 cup marks

Description A flat, horizontal stone. There is a cup mark in one of the foot prints, these are completely carved out.

Location On a terrace about 300 m.a.s.l., Hausatveiti. There are three panels here. Hauso 2 is set back from the edge of the terrace, about 30 m west of panel 1.

Documentation Bakka 1955

Literature Bakka 1963; Mandt Larsen 1972

Hauso 4

Farm Hauso

Municipality Ullensvang

RA ID no 130857-1

FK no ---

M.a.s.l. 754

Date BA-IA

Landscape zone 3

Figures 10-13

Motif 10-13 cup marks

Description Boulder

Location Located on a steep terrace. There is a drop ending in a scree about 20-30 metres NW. The old road to the summer farm is close by, and the remains of Hausstølen summer farm is located a few hundred metres to the NW. View of Sørfjorden, Hardangerfjorden and Granvinfjorden.

Documentation Adriansen 1996

Literature --

Haustveit 1

Farm Haustveit

Municipality Ullensvang

RA ID no 101639-1

FK no 1

M.a.s.l. 250

Date BA, period 2-5

Landscape zone 3

Figures 18

Motif 6 ships, 6 complex rings, 1 animal, 1 line figure, 4 unidentifiable figures, 2 possible animals

Description A large boulder, with four panels, A-D. Panel A: the largest panel facing the fjord. Most of the images are found here. Panel B: on the northern side of the boulder facing the terrace there is a small vertical panel with a ship and a ring. Panel C: On the western side of the boulder there is a small vertical area close to the ground, where a line figure is located. Panel D: a small vertical area parallel to panel C and close to the ground, two ships. Several test pits have been opened around the stone, most recently in 2008, when two Neolithic axes of the Vestland-type were found.

Location On a large boulder on a terrace about 250 m.a.s.l. The boulder is located in the centre of the terrace, and about 10 metres behind it there is an old scree. The view of the fjord is very good.

Documentation Bakka 1962; Mandt Larsen 1967; Bakka and Mandt Larsen 1969

Literature Bakka 1963; Mandt Larsen 1972

Hesthamar 1

Farm Hesthamar
Municipality Ullensvang
RA ID no 101643-1
FK no 4
M.a.s.l. 400
Date BA-IA
Landscape zone 3
Figures 8
Motif 8 cup marks
Description On a boulder, no other information.
Location Boulder at Smylvehaug.
Documentation Fett 1954
Literature Mandt Larsen 1972

Holo 1

Farm Holo
Municipality Odde
RA ID no ---
FK no ---
M.a.s.l. 700
Date LBA?
Landscape zone 3
Figures 1
Motif 1 hand with wrist/arm
Description A completely filled image of a hand with wrist. There are five fingers. The image stops at the edge of the stone.
Location In Valdalen valley, which now is a reservoir. There were several summer arms here, located on morainic terraces up from the river and lake. Panels 1 and 2 were located at Søre Træo, a summer farm that belonged to Holo. Panel 1 is located on the easternmost stone, slanting slightly to the N.
Documentation Myhre and Odner 1962
Literature Myhre and Odner 1962; Mandt Larsen 1972

Holo 2

Farm Holo

Municipality Odda

RA ID no ---

FK no ---

M.a.s.l. 700

Date LBA?

Landscape zone 3

Figures 1

Motif 1 foot print

Description A completely filled foot print, with five separated toes, in the centre of the stone. The image is lightly pecked.

Location In Valldalen valley, which now is a reservoir. There were several summer farms here, located on morainic terraces up from the river and lake. Panels 1 and 2 were located at Søre Træo, a summer farm that belonged to Holo. Panel 2 is found on a stone 0.5 metres SW of panel 1.

Documentation Myhre and Odner 1962

Literature Myhre and Odner 1962; Mandt Larsen 1972

Holsnanuten

Farm ---

Municipality Etne

RA ID no ---

FK no ---

M.a.s.l. 1100

Date BA-IA

Landscape zone 2/3

Figures 7

Motif 7 cup marks

Description A large square boulder

Location The panel is found on a large boulder on the southern slope from the top of Nordre Holsnanuten mountain, W of the western of two brooks.

Documentation Bakka 1956

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Horda 1

Farm Horda

Municipality Odda

RA ID no 108477-/

FK no ---

M.a.s.l. 910

Date BA-IA

Landscape zone 3

Figures 3

Motif 3 cup marks

Description The boulder is flat. The cup marks are found on the top of the boulder, in the northern part.

Location In Håradalen valley, about 100 metres N of Fjellstølen, a summer farm, and 30-40 metres from the old road. The panel is found on a large, flat boulder.

Documentation Report 2005, Hordaland Fylkeskommune

Hovland 1

Farm Hovland

Municipality Ullensvang

RA ID no 101661-1

FK no 4/1

M.a.s.l. 690

Date BA-IA

Landscape zone 3

Figures 20

Motif 20 cup marks

Description Boulder, flat on top. The cup marks are found on the southern half.

Location Hovlandsstølen, a summer farm in a valley, 690 m.a.s.l. There are five cup marked boulders and stones here. Panel one is a boulder 6-7 metres SSW of the farm house.

Documentation Bakka 1955

Literature Bakka 1963; Mandt Larsen 1972

Hovland 2

Farm	Hovland
Municipality	Ullensvang
RA ID no	101661-5
FK no	4/2
M.a.s.l.	690
Date	BA-IA
Landscape zone	3
Figures	5
Motif	5 cup marks
Description	Boulder, hard rock. The cup marks are in a row.
Location	Hovlandsstølen, a summer farm in a valley, 690 m.a.s.l. There are five cup marked boulders and stones here. Panel 2 is a boulder 1.5 metres E of panel 1.
Documentation	Bakka 1955
Literature	Bakka 1963; Mandt Larsen 1972

Hovland 3

Farm	Hovland
Municipality	Ullensvang
RA ID no	101661-6
FK no	4/3
M.a.s.l.	690
Date	BA-IA
Landscape zone	3
Figures	1
Motif	1 cup mark
Description	Large boulder, the cup mark is found on the top which slopes W, about 75 cm from the southern corner.
Location	Hovlandsstølen, a summer farm in a valley, 690 m.a.s.l. There are five cup marked boulders and stones here. Panel 3 is a boulder close to the farm house, on the southern side.
Documentation	Bakka 1955
Literature	Bakka 1963; Mandt 1972

Hovland 4

Farm Hovland

Municipality Ullensvang

RA ID no 101661-7

FK no 4/4

M.a.s.l. 690

Date BA-IA

Landscape zone 3

Figures 3

Motif 3 cup marks

Description Low, almost flat, horizontal boulder. The cup marks are found on top, one near the highest part and two in the SW part.

Location Hovlandsstølen, a summer farm in a valley, 690 m.a.s.l. There are five cup marked boulders and stones here. Panel 4 is a boulder 8-10 metres below panel 1-2.

Documentation Bakka 1955

Literature Bakka 1963; Mandt Larsen 1972

Hovland 5

Farm Hovland

Municipality Ullensvang

RA ID no 101662-1

FK no ---

M.a.s.l. ---

Date BA-IA

Landscape zone 3

Figures ?

Motif cup marks, exact number unknown

Description The cup marks are no longer visible. They are found on a slab that is used as a bridge over a brook, it used to be placed in front of the door of one of the farm buildings.

Location Hovland, in a secondary position over a brook. No provenance.

Documentation Fett 1954

Literature Mandt Larsen 1972

Hovland 6

Farm Hovland

Municipality Ullensvang

RA ID no 130866-1

FK no ---

M.a.s.l. 626

Date BA-IA

Landscape zone 3

Figures 108-119

Motif 108-119 cup marks

Description Large boulder

Location The boulder is located in a scree at Hovlandstølen, a summer farm. The farm yard is found near the boulder which is located NE of the farm house. The farm is located on an open terrace.

Documentation Adriansen 1997

Husa 1

Farm Husa

Municipality Kvinnherad

RA ID no ---

FK no 1

M.a.s.l. ---

Date BA-IA

Landscape zone 2

Figures 9

Motif 9 cup marks

Description Triangular stone

Location The stone was found in a stone wall. No provenance. Now kept in Bergen Museum, B 09683

Documentation ---

Literature Bergen Museums årbok 1946; Mandt Larsen 1972

Huse 1

Farm Huse
Municipality Ullensvang
RA ID no 100908-1
FK no 5
M.a.s.l. 110
Date BA-IA
Landscape zone 3
Figures 8
Motif 8 cup marks
Description Low boulder.
Location Rocky area 50 m from the farm yard.
Documentation Bakka 1955
Literature Mandt 1972

Håland 1

Farm Håland
Municipality Etne
RA ID no ---
FK no ---
M.a.s.l. ---
Date BA-IA
Landscape zone 2
Figures 11
Motif 11 cup marks
Description Small stone
Location The stone bearing the cup marks was found in a supporting wall for the road.
No provenance. Now kept at the Bergen Museum, B10909
Documentation
Literature Bergen Museums Årbok 1954; Mandt 1972; Vevatne 1996

Lekve 1

Farm Lekve Øvre

Municipality Ulvik

RA ID no 15911-1

FK no ---

M.a.s.l. 240

Date BA-IA

Landscape zone

Figures 1-2

Motif 1-2 cup mark, and two possible cup marks

Description ---

Location At Tunheim, a terrace at Lekve. There are several barrows here. There is an outcrop NW of the old stone wall around "Kalvatræet", where the cup marks are located

Documentation Sognnes 1974, note in the Bergen Museum archives

Literature Sognnes 1977

Lekve 2

Farm Lekve Øvre

Municipality Ulvik

RA ID no 120969-1

FK no ---

M.a.s.l. 660

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description ---

Location The cup mark is found on a giant boulder that also forms a rock shelter on one side, near Jonstøl summer farm. The location is called Musakolhaugane, and the ownership of this area is split between Syse and Lekve. I have given the site the name Lekve 2.

Documentation

Literature Sognnes 1977

Lekve 3

Farm Lekve Øvre

Municipality Ulvik

RA ID no 120962-1

FK no ---

M.a.s.l. 610

Date BA-IA

Landscape zone 3

Figures 6

Motif 6 cup marks

Description Large boulder, some quartz.

Location The boulder is located on a terrace along with two other cup marked boulders, the registration number in the Askeladden database refers to all three boulders. I have numbered them Lekve 3, 4 and 5. Lekve 3 is found about 105 metres from the place where the path up to Jonsstølen splits and a track veers off to the SW. A large boulder known as "Brurestølen", as it is shaped like a chair, is located at this "junction". There are four boulders on the terrace. NB: this site is also registered as no 6084 in Askeladden, but under the farm Syse.

Lekve 4

Farm Lekve Øvre

Municipality Ulvik

RA ID no 120962-1

FK no ---

M.a.s.l. 610

Date BA-IA

Landscape zone 3

Figures 5

Motif 5 cup marks

Description ---

Location The boulder is located on a terrace along with two other cup marked boulders, the registration number in the Askeladden database refers to all three boulders. I have numbered them Lekve 3, 4 and 5. Panel 4 is found about 20 metres WSW of panel 3. NB: this site is also registered as no 6084 in Askeladden, but under the farm Syse.

Lekve 5

Farm Lekve Øvre

Municipality Ulvik

RA ID no 120962-1

FK no ---

M.a.s.l. 610

Date BA-IA

Landscape zone 3

Figures 3

Motif 3 cup marks

Description ---

Location The boulder is located on a terrace along with two other cup marked boulders, the registration number in the Askeladden database refers to all three boulders. I have numbered them Lekve 3, 4 and 5. Panel 5 is found about 15 metres NW of panel 3. NB: this site is also registrered as no 6084 in Askeladden, but under the farm Syse.

Lekve 6

Farm Lekve øvre

Municipality Ulvik

RA ID no 120948-1

FK no ---

M.a.s.l. 590

Date BA-IA

Landscape zone 3

Figures 2

Motif 2 cup marks

Description Towards the top of a large outcrop partially covered by vegetation. There could be more images here. The panel slants to the S and W.

Location On a terrace in steep terrain between Sæberg and Jonsstøl, near the path. Discovered in 2008, no other information. Located about 50 metres from registration no 120962. Good view of Ulvik.

Lekve 7

Farm Lekve øvre

Municipality Ulvik

RA ID no 120968-1

FK no ---

M.a.s.l. 600

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description Towards the top of a large outcrop partially covered by vegetation. There could be more images here. The panel slants to the S and W.

Location On a terrace in steep terrain between Sæberg and Jonsstøl, near the path. Discovered in 2008, no other information. Located about 50 metres from registration no 120962. Good view of Ulvik. Note: the description is very similar to ID no 120948 - same panel?

Lekve 8

Farm Lekve øvre

Municipality Ulvik

RA ID no 1209779-1

FK no ---

M.a.s.l. 550

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description The cup mark is large, 9 cm across, and is found on the edge of the boulder

Location The panel is found on a large boulder in a scree. The boulder is known as "Kræklingabærsteinen" and is located by the path from Sæberg to Jonsstølen. Sæberg is an old summer farm. B01008, a period 6 Hallstatt sword, was found in a crack near the boulder.

Documentation

Literature Sognnes 1977

Linga 1

Farm Litle Linga

Municipality Kvam

RA ID no 97482

FK no ---

M.a.s.l. 10,64-12,94

Date EBA-LBA

Landscape zone 2

Figures 74

Motif 22 ships of which only 4 can be typologically classified, 18 boats cannot be classified, 1 ring, 51 fragmentary lines that probably are ships.

Description The rock surface is eroded and the images are impossible to see unless the lighting conditions are good. Several cracks split the outcrop into several smaller panels.

Location An outcrop at Litle Linga, below the barn and next to the modern road and about 20-30 metres from the shore.

Documentation Gjerde, Linge & Wrigglesworth 2002.

Literature Gjerde 2002

Linga 2

Farm Linga

Municipality Kvam

RA ID no 97468 (refers to cairn)

FK no 2/1 (refers to cairn)

M.a.s.l. 30-40

Date IA?

Landscape zone 2

Figures ?

Motif cup marks

Description The stone was found after an excavation of the cairn, the cup marks faced the ground. There were also cup marks on the sides of the stone.

Location A stone covered in cup marks was found in a cairn at Linga, Fett's no 2/1. Now lost.

Literature Fett 1954b

Linga 3

Farm Linga

Municipality Kvam

RA ID no 97247-1

FK no ---

M.a.s.l. ---

Date STA

Landscape zone 2

Figures 1

Motif 1 possible animal depiction

Description Possible depiction of a deer. One hind leg, possibly also some superposition

Location At Store Linga. The site was discovered recently and no other information is yet available. I have labelled the site Linga 3.

Ljono 1

Farm Ljono

Municipality Ulvik

RA ID no 66540-1

FK no 3

M.a.s.l. 300

Date BA-IA

Landscape zone 3

Figures 8

Motif 8 cup marks

Description The cup marks are arranged in two parallel rows

Location On an outcrop which is called "Solhovden", 40 metres E of the farm house.

Documentation Bakka 1951

Literature Mandt Larsen 1972; Sognnes 1977

Ljono 2

Farm Ljono

Municipality Ulvik

RA ID no 66541-1

FK no ---

M.a.s.l. 280

Date BA-IA

Landscape zone 3

Figures 24

Motif 24 cup marks

Description The cup marks are arranged in three parallel rows, a row of 6 cup marks, two rows of four cup marks, four cup marks in a semi-circle, six other cup marks, two are found between two of the rows.

Location 50 metres NE of the barn, on a slope 25 metres N of the road to the farm. The stone barely sticks up from the ground, and was discovered during ploughing in the 1950s.

Documentation Bakka 1958, note in Bergen museum archives, Sognnes 1974, note in Bergen museum archives

Literature Sognnes 1977

Lofthus 1

Farm Lofthus

Municipality Ullensvang

RA ID no ---

FK no 2

M.a.s.l. 350

Date BA-IA

Landscape zone 3

Figures 5-6

Motif 5-6 cup marks

Description The cup marks are found on top of the boulder, about 0.5 metres from the western edge, in a flat area.

Location On a slope with few rocks, about 350 m.a.s.l.. There are two large boulders here, about 20 metres south of the track, and the panel is found on one of these. The height is about 2.5 metres, 5x9 metres wide. Excellent area for pasture, and the boulder offers some protection for the animals.

Documentation Bakka 1955

Literature Bakka 1963; Mandt Larsen 1972

Lote 1

Farm Lote

Municipality Ullensvang

RA ID no 127131-1

FK no 3/1

M.a.s.l. 700

Date BA-IA

Landscape zone 3

Figures 10

Motif 10 cup marks

Description A small rock outcrop with a horizontal area on top, where the cup marks are located.

Location The path to the summer farm follows Lotesgjelet gully up to a boggy area which it crosses. Here, close to the path there are cup marked stones and outcrops up on the slope. Panel 1 is located E of the path, 30 metres E of the drop.

Documentation Bakka 1953

Literature Bakka 1963; Mandt Larsen 1972

Lote 2

Farm Lote

Municipality Ullensvang

RA ID no 127131-2

FK no 3/2

M.a.s.l. 700

Date BA-IA

Landscape zone 3

Figures 10

Motif 10 cup marks

Description On an angled surface which inclines 45 degrees

Location The path to the summer farm follows Lotesgjelet gully up to a boggy area which it crosses. Here, close to the path there are cup marked stones and outcrops up on the slope. Panel 2 is found on a boulder next to panel 1, separated only by a narrow passage.

Documentation Bakka 1953

Literature Bakka 1963; Mandt Larsen 1972

Lote 3

Farm Lote

Municipality Ullensvang

RA ID no 127251-1

FK no 3/3

M.a.s.l. 700

Date BA-IA

Landscape zone 3

Figures 4

Motif 4 cup marks

Description The cup marks are spread on a flat outcrop in an area spanning 3 metres

Location The path to the summer farm follows Lotesgjelet gully up to a boggy area which it crosses. Here, close to the path there are cup marked stones and outcrops up on the slope. Panel 3 is located about 100 metres N of panel 1, 15 metres W of the edge of the gully.

Documentation Bakka 1955

Literature Bakka 1963; Mandt Larsen 1972

Lote 4

Farm Lote

Municipality Ullensvang

RA ID no 127254-1

FK no 4

M.a.s.l. 500

Date LN-IA

Landscape zone 3

Figures 15-20

Motif 15-20 cup marks

Description The cup marks are spread on a vertical panel on the large boulder inside the rock shelter.

Location A few hundred metres N of Gjelet gully, about 500 M.a.s.l., there is a grassy and rocky terrace, with some boggy areas. Here there is a giant boulder, height 10-12 metres and width 20 metres, under which there is a rock shelter. The cup marks are found on a large boulder inside the shelter. A brook is located close to the boulder.

Documentation Bakka 1955

Literature Bakka 1963; Mandt Larsen 1972

Lunda 1

Farm Lunda

Municipality Etne

RA ID no 90136-1

FK no 1/1

M.a.s.l. 110

Date BA-IA

Landscape zone 2

Figures 3

Motif 3 cup marks

Description The cup marks are very deep. The first rays of the sun in the spring (16 January according to Fett 1963) hit the stone, but not the farm yard

Location A small boulder 25 metres N of the farm house and 3 metres SW of the smithy. Six panels have been documented at Lunda (Gjerde 2000; Vevatne 1996). However, panels 4 and 6 are probably natural "cup marks". I have not included them here.

Documentation Fett 1962; Sør-Reime 1981

Literature Mandt Larsen 1972; Vevatne 1996

Lunda 2

Farm	Lunda
Municipality	Etne
RA ID no	90128-1
FK no	1/2
M.a.s.l.	110
Date	BA-IA
Landscape zone	2
Figures	2
Motif	2 cup marks
Description	---
Location	A slab that is now part of the entrance of the farm house.
Documentation	Fett 1962; Sør-Reime 1981
Literature	Mandt Larsen 1972; Vevatne 1996

Lunda 3

Farm	Lunda
Municipality	Etne
RA ID no	90134-1
FK no	---
M.a.s.l.	110
Date	BA-IA
Landscape zone	3
Figures	?
Motif	cup marks
Description	The rock is eroded, difficult to determine whether the cup marks are natural or not.
Location	On an outcrop that is part of the foundations for the bridge to the barn.
Documentation	Sør-Reime 1981; Gjerde 2000
Literature	Vevatne 1996

Lunda 5

Farm Lunda

Municipality Etne

RA ID no ---

FK no ---

M.a.s.l. 100

Date BA-IA

Landscape zone 2

Figures 4

Motif 2 cup marks, 1 cross and 1 groove (possibly one half of a cross).

Description ---

Location On a slab in a wall 3.3 metres N of the NE corner of the farm house. Note: Lunda 4 and 6 are natural depressions and are not included here.

Documentation Sør-Reime 1981; Gjerde 2000

Literature Vevatne 1996

Lunde 1

Farm Lunde

Municipality Vindafjord (Ølen)

RA ID no ---

FK no ---

M.a.s.l. c. 40-60

Date BA-IA (EBA?)

Landscape zone 2

Figures 7

Motif 7 cup marks, not entirely certain

Description Somewhat oblong cup marks

Location At Slettane, near the mountain, there is a stone with possible cup marks. In this area, three massive bronze axes were found in Slettakjeldo spring. The location of the cup marks in relation to the spring is not clear.

Documentation Fett 1950

Literature Mandt Larsen 1972

Lussnes 1

Farm	Lussnes
Municipality	Etne
RA ID no	90145-1
FK no	2
M.a.s.l.	100
Date	BA-IA
Landscape zone 2	
Figures	37
Motif	37 cup marks, 1 possible cup mark
Description	The stone is cracked and eroded.
Location	Large boulder split in half, located 50 metres below the road and 70 metres SW of the farm house
Documentation	Fett 1962, Mandt Larsen 1966, Sør-Reime 1981
Literature	Mandt Larsen 1972; Vevatne 1996

Lussnes 2

Farm	Lussnes
Municipality	Etne
RA ID no	90154-1
FK no	---
M.a.s.l.	60-70
Date	BA-IA
Landscape zone 2	
Figures	3
Motif	3 cup marks
Description	---
Location	On a large boulder 170 metres SSE of Lussnes 1
Documentation	Gjerde 2000, report in Bergen Museum archives

Lutro 1

Farm Lutro

Municipality Ullensvang

RA ID no 131041-1

FK no 4

M.a.s.l. 47

Date BA-IA

Landscape zone 3

Figures 6-8

Motif 6-8 cup marks

Description The cup marks were located on the southern part of the boulder

Location The boulder was located on a slope in a valley near the modern road. When the road was built the boulder was partially blown up and was thought to have been buried under the road. In 1995 part of the boulder was found near the road, only 1 cup mark remains.

Documentation Bakka 1951; Adriansen 1996

Literature Mandt Larsen 1972

Lutro 2

Farm Lutro

Municipality Ullensvang

RA ID no 131044-1

FK no 9

M.a.s.l. 45

Date BA-IA

Landscape zone 3

Figures 8

Motif 8 cup marks

Description The boulder was relatively flat on top, the cup marks were located in the SW part.

Location Storsteinen, a large boulder measuring 5x3 metres, was located in an orchard, near the old farm yard. Two years after it had been documented it was blown up and destroyed. Parts of the rock with the cup marks exists as slabs. Original location 100 m.a.s.l., now 45 m.a.s.l.

Documentation Mandt Larsen 1967

Literature Mandt Larsen 1972

Lutro 3

Farm Lutro

Municipality Ullensvang

RA ID no 131046-1

FK no 6/1

M.a.s.l. 340

Date BA-IA

Landscape zone 3

Figures 40

Motif 40 cup marks

Description The boulder is flat on top, the cup marks are mainly concentrated in the centre, but 8-10 cup marks are located in the SW corner

Location At Tveiti, a terrace about 340 m.a.s.l.. There are several remains of small houses and clearance cairns. The area is covered by forest now. There are three panels here, Lutro 3-5. Panel 3 is located on a large boulder on the border between two farms.

Documentation Bakka 1955; Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Lutro 4

Farm Lutro

Municipality Ullensvang

RA ID no 131048-1

FK no 6/2

M.a.s.l. 339

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description The cup mark is found on top of the boulder.

Location At Tveiti, a terrace about 340 m.a.s.l.. There are several remains of small houses and clearance cairns. There are three panels here, Lutro 3-5. Panel 4 is

found on a large boulder 6-8 metres S of panel 1.

Documentation Bakka 1955; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Lutro 5

Farm Lutro
Municipality Ullensvang
RA ID no 131049-1
FK no 6/3
M.a.s.l. 340
Date BA-IA

Landscape zone 3

Figures 1
Motif 1 cup mark

Description The cup mark is located on the top of the boulder.

Location At Tveiti, a terrace about 340 m.a.s.l.. There are several remains of small houses and clearance cairns. There are three panels here, Lutro 3-5. Panel 5 is located on a large boulder 75 metres S of panels 1-2.

Documentation Bakka 1955; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Lutro 6

Farm Lutro
Municipality Ullensvang
RA ID no 131050-1
FK no ---
M.a.s.l. 43
Date BA-IA

Landscape zone 3

Figures 1
Motif 1 cup mark

Description Small stone, 46x32x10 cm.

Location A small stone in the garden, found in a field and later moved to its present

location.

Documentation Adriansen 1996

Lutro 7

Farm Lutro

Municipality Ullensvang

RA ID no 131052-1

FK no ---

M.a.s.l. 16

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 ring

Description Reddish quartzite inside the ring

Location The ring is found on a stone in the wall of a cabin at Kyrkjeneset. It was found in the area before the cabin was built. No provenance.

Documentation Adriansen 1996

Lægreid 1

Farm Lægreid/Eidfjord kirke

Municipality Eidfjord

RA ID no 101224-1

FK no 3/1

M.a.s.l. 30-40

Date BA-IA

Landscape zone 3

Figures 52

Motif 52 cup marks

Description Squarish flat slab

Location "Liksteinen" is a flat slab in the church yard wall. According to tradition, the coffin had to rest on the stone before the funeral. Mandt Larsen 1972 names the site as Eidfjord kirke, I have named it Lægreid 1.

Documentation Bøe 1931, Gundersen 2004

Literature Bøe 1953; Mandt Larsen 1972

Lægreid 2

Farm Lægreid/Eidfjord kirke

Municipality Eidfjord

RA ID no 102124-2

FK no ---

M.a.s.l. 30-40

Date Medieval

Landscape zone 3

Figures 1

Motif 1 possible cup mark

Description A carved depression, oblong, could perhaps be interpreted as a dagger. The gravestone is trapezoid and weathered.

Location In the church yard at Eidfjord church, there is a gravestone with an irregular cup mark or other carved image. It is located 4 metres from the northern wall of the church. I have named this panel Lægreid 2.

Documentation Gundersen 2004

Literature ---

Lægreid 3

Farm Lægreid

Municipality Eidfjord

RA ID no 102125-1

FK no 3/2

M.a.s.l. 30-40

Date BA-IA

Landscape zone 3

Figures ?

Motif Cup marks, unknown number

Description ---

Location North of Eidfjord church a stone with a number of cup marks was found about

5-6 metres from a burial that was not marked by a barrow. The stone was smashed and removed due to cultivation about 70-80 years ago.

Documentation ---

Literature Mandt Larsen 1972

Meland 1

Farm Meland

Municipality Ullensvang

RA ID no 130863-1

FK no 5

M.a.s.l. 770

Date BA-IA

Landscape zone 3

Figures 4

Motif 4 cup marks

Description The stone is flat on top. Only one of the cup marks is visible, the rest are shallow and eroded. 3-6 cup marks have been recorded, but according to Mandt 1972 only four can be verified.

Location A boulder at Våga, the summer farm that belongs to Meland. There are grassy meadows here, and a brook. The cup marked stone is located 10 metres from a large and isolated boulder, and 15 metres SW of the NW house.

Documentation Bakka 1955; Adriansen 1997

Literature Mandt Larsen 1972

Meland 2

Farm Meland

Municipality Ullensvang

RA ID no 130864-1

FK no ---

M.a.s.l. 786

Date BA-IA

Landscape zone 3

Figures 2-4

Motif 2-4 cup marks

Description Rock outcrop
Location Våga, the summer farm that belongs to Meland. There are grassy meadows here, and a brook.
Documentation Adriansen 1997
Literature ---

Midnes 1

Farm Midnes
Municipality Ullensvang
RA ID no ---
FK no 1
M.a.s.l. ---
Date BA-IA
Landscape zone 3
Figures 5
Motif 5 cup marks
Description Probably lost
Location The old "kongsberg" road from the Sørfjord passed a place called Storhaug, and in the northern part of this there is a boulder with cup marks
Documentation Bakka 1955
Literature Mandt Larsen 1972

Myklestad 1

Municipality Tysnes
RA ID no ---
FK no ---
M.a.s.l. ---
Date BA-IA
Landscape zone 2
Figures 3
Motif 2 foot prints in a pair, 1 rectangular line-figure: rune-like images within a frame.
Description The stone is rectangular, with the foot prints at one end, followed by the frame and "runes".

Location The stone was found in the foundation wall of a house, where it had been moved from the foundations of an older house. It might originally have come from a grave, Fetts no 1 at Myklastad, as a burial chamber was apparently found here. However, there is no clear information about where the stone was originally found. Now kept at Bergen Museum, B100067

Documentation ---

Literature Bergen museums Årbok 1949; Mandt Larsen 1972

Måkestad 1

Farm Måkestad

Municipality Ullensvang

RA ID no 130862-1

FK no 5

M.a.s.l. 535

Date BA-IA

Landscape zone 3

Figures 6-7

Motif 6-7 cup marks

Description Five cup marks are found close together near the northern edge of the stone

Location At the summer farm belonging to Måkestad 10 metres SE of the southernmost building, at the start of a slope.

Documentation Bakka and Mandt Larsen 1969; Adriansen 1996

Literature Mandt Larsen 1972

Nerheim 1

Farm Nerheim

Municipality Vindafjord(Ølen)

RA ID no ---

FK no ---

M.a.s.l. ---

Date BA-IA

Landscape zone 2

Figures 1

Motif 1 geometric motif: two parallel lines with a line at either end

Description Small stone
Location The image is found on a small stone that was found on a slope near the sea. No provenance.
Documentation Bakka 1954
Literature Mandt Larsen 1972

Nes 1

Farm Nes
Municipality Kvam
RA ID no 97385
FK no ---
M.a.s.l. 740
Date BA-IA
Landscape zone 2
Figures 2
Motif 2 cup marks
Description ---
Location On a summer farm. The cup marks are found on a boulder S of the farm buildings.
Documentation ---
Literature ---

Notten 1

Farm Hjelmavoll
Municipality Ulvik
RA ID no 55327-1
FK no 2
M.a.s.l. 240
Date BA-IA
Landscape zone 3
Figures 5
Motif 5 cup marks
Description Three cup marks form a row, the remaining two are close by.

Location On an outcrop about 40 metres NE of the barn.
Documentation Sognnes 1974, note in the Bergen Museum archives
Literature Sognnes 1977

Nystøl 1

Farm Vik Øvre
Municipality Kvam
RA ID no 121013-1
FK no ---
M.a.s.l. 416
Date BA-IA
Landscape zone 2
Figures ---
Motif cup marks
Description Number of cup marks is not known
Location At a summer farm.

Nystøl 2

Farm Vik Øvre
Municipality Kvam
RA ID no 121024
FK no ---
M.a.s.l. 417
Date BA-IA
Landscape zone 2
Figures ---
Motif cup marks
Description Number of figures is not known
Location At a summer farm.

Opedal 1

Farm Opedal

Municipality Ullensvang

RA ID no ---

FK no 13

M.a.s.l. 100

Date BA-IA

Landscape zone 3

Figures 5

Motif 5 cup marks

Description ---

Location The panel is found on a stone close to the main road, at "Hagen", about 150-200 metres E of the farm yard. Not found in 1995

Documentation Bakka 1955

Literature Bakka 1963; Mandt Larsen 1972; Adriansen 1996

Opedal 2

Farm Opedal

Municipality Ullensvang

RA ID no 131035-1

FK no 15/1

M.a.s.l. 450

Date BA-IA

Landscape zone 3

Figures 22

Motif 22 cup marks, some are connected by grooves

Description The stone is square and flat. The cup marks are clustered in the SW corner

Location Skodnasete is a summer farm about 450 m.a.s.l.. The farm houses are located on an almost flat terrace surrounded by sloping terrain. This is now forested and the houses in ruins. There are five cup marked stones here. Panel 2 is found on a stone ESE of the northern building and 10 metres from the top of the slope.

Documentation Bakka 1955, Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Opedal 3

Farm Opedal

Municipality Ullensvang

RA ID no 131036-1

FK no 15/2

M.a.s.l. 450

Date BA-IA

Landscape zone 3

Figures 6-7

Motif 6-7 cup marks

Description The stone is square and flat on top

Location Skodnasete is a summer farm about 450 m.a.s.l.. The farm houses are located on an almost flat terrace surrounded by sloping terrain. This is now forested and the houses in ruins. There are five cup marked stones here. Panel 2 is found on a stone 100 metres E of the southern house, at the top of a slope.

Documentation Bakka 1955, Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Opedal 4

Farm Opedal

Municipality Ullensvang

RA ID no 131037-1

FK no 15-3

M.a.s.l. 440

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description The panel is slanted.

Location Skodnasete is a summer farm about 450 m.a.s.l.. The farm houses are located on an almost flat terrace surrounded by sloping terrain. This is now forested and the houses in ruins. There are five cup marked stones here. Panel 4 is found on a stone on a steep slope about 40 metres ESE of the southern house.

Documentation Bakka 1955, Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Opedal 5

Farm Opedal

Municipality Ullensvang

RA ID no 131039-1

FK no 15/

M.a.s.l. 450

Date BA-IA

Landscape zone 3

Figures 24

Motif 24 cup marks, two are connected by a groove

Description The boulder (180 x 150 x 50 cm) is eroded, the cup marks are difficult to see.

Location Skodnasete is a summer farm about 450 m.a.s.l.. The farm houses are located on an almost flat terrace surrounded by sloping terrain. This is now forested and the houses in ruins. There are five cup marked stones here. Panel 4 is found on a stone 13 metres S of the southern house.

Documentation Bakka 1955, Adriansen 1996

Literature Bakka 1963; Mandt Larsen 1972

Opedal 6

Farm Opedal

Municipality Ullensvang

RA ID no ---

FK no 15/4

M.a.s.l. 450

Date BA-IA

Landscape zone 3

Figures 2

Motif 1 cup mark

Description A large square rock, split into four, flat on top. The cup mark is located in the SW part

Location Skodnasete is a summer farm about 450 m.a.s.l.. The farm houses are located on an almost flat terrace surrounded by sloping terrain. This is now forested

and the houses in ruins. There are five cup marked stones here. Panel 6 is found on a stone near the path from the summer farm to the farm, but has not been found in recent years.

Documentation Bakka 1955; Adriansen 1996
Literature Bakka 1963; Mandt Larsen 1972

Opedal 7

Farm Opedal
Municipality Ullensvang
RA ID no 105726-1
FK no ---
M.a.s.l. 170
Date BA-IA

Landscape zone 3

Figures 38
Motif 38 cup marks, including 3 double cup marks. 6 cup marks are uncertain.
Description Square, large boulder, about 25 m², sloping to the west.
Location In a small valley about 170 m.a.s.l., 100 metres from River Opo, and near the road, in gently sloping terrain. Steep mountain sides, the panel is located in the upper part of the valley, not far from a mountain pass.

Documentation Adriansen 1994; Nyland and Handeland 2003

Opheim 1

Farm Opheim
Municipality Odde
RA ID no ---
FK no 1
M.a.s.l. ---
Date BA-IA

Landscape zone 3

Figures 1
Motif 1 complex ring, with four radii and four cup marks, one in each quarter.
Description Small, triangular stone

Location The stone was found in a supporting wall next to an old building. No provenance. The stone is now kept at the Bergen Museum, B-no. 10993

Documentation ---

Literature Bergen Museum Årbok 1955; Bakka 1963; Mandt Larsen 1972

Reisæter 1

Farm Reisæter

Municipality Ullensvang

RA ID no 101091-1

FK no 3

M.a.s.l. 330

Date BA-IA

Landscape zone 3

Figures 6-10

Motif 6-10 possible cup marks

Description The rock outcrop is eroded and uneven, and it is difficult to determine whether the cup marks are artificial or natural.

Location On a rock outcrop at Haugen, close to the farm yard.

Documentation Bakka and Mandt Larsen 1969

Literature Mandt Larsen 1972; Fett 1975

Reisæter 2

Farm Reisæter

Municipality Ullensvang

RA ID no 128938-1

FK no ---

M.a.s.l. 1000

Date LBA?

Landscape zone 3

Figures 19

Motif 13 cup marks and 6 foot prints in three pairs, the exact number is not known.

Description ---

Location The panel is found on a boulder at Dravladalsvatnet lake, which is dammed.

The boulder is submerged most of the year. The area is an old summer farm belonging to Reisæter, it has not been used since the mid-1800s.

Documentation Innselset 1999. I have named this panel Reisæter 2. The Askeladden database has another entry for Dravladalsvatnet, 128939-1, but there is no description and this could be an error.

Ringøy 1

Farm Ringøy

Municipality Ullensvang

RA ID no 131053-1

FK no ---

M.a.s.l. 5

Date LBA-EIA

Landscape zone 3

Figures 9

Motif 9 rings

Description Several holes have been drilled in the outcrop below the images.

Location At Litlekleivneset promontory in the Eidsfjord sidearm of the Hardangerfjord, on a rock outcrop close to the sea.

Documentation Adriansen 1994

Ringøy 2

Farm Ringøy

Municipality Ullensvang

RA ID no 131053-2

FK no ---

M.a.s.l. 5

Date LBA-EIA

Landscape zone 3

Figures 1

Motif 1 ring

Description Rock outcrop

Location At Litlekleivneset promontory in the Eidsfjord sidearm of the Hardangerfjord, on a rock outcrop close to the sea, 8-10 metres from panel 1.

Documentation Adriansen 1994

Rogdaberg 1

Farm Rogdaberg

Municipality Ullensvang

RA ID no 130861-1

FK no ---

M.a.s.l. 190

Date BA-IA

Landscape zone 3

Figures ---

Motif cup marks

Description ---

Location Below the road that passes Rogdaberg farm there is a place called Lykklabakkjen, where there is a stone with cup marks.

Rykkje 1

Farm Bjelkanes

Municipality Kvam

RA ID no 97498-1

FK no 4

M.a.s.l. 20

Date STA

Landscape zone 2

Figures 1

Motif One single deer, possibly reindeer

Description The panel is vertical. There are several cracks, one crack crosses the animal's neck. The rock is eroded, but the image is clearly visible when one is close to the panel.

Location At Bjelkanes promontory, approx. 3 metres from the modern road, at the foot of a large cliff. The panel faces south, good view of the fjord. Note: the panel is called Rykkje 2 in Mandt Larsen 1972. As Rykkje 1 is lost, the site is usually referred to as Rykkje.

Documentation Bøe 1951

Literature Mandt Larsen 1972

Rykkje 2

Farm Bjelkanes

Municipality Kvam

RA ID no ---

FK no ---

M.a.s.l. ---

Date STA-BA

Landscape zone 2

Figures 3-4

Motif 3-4 geometric figures/frames with lines inside

Description Small stone, found during roadworks in the early 1900s. The stone was flat on one side and rounded on the other side. Now lost.

Location Found at Stokkaland near the Fykkesundet sound, in a field near a rock shelter. Note: The panel is called Rykkje 1 in Mandt Larsen 1972.

Documentation ---

Literature Mandt Larsen 1972

Røykjenes 1

Farm Røykjenes

Municipality Sveio

RA ID no 106065-1

FK no ---

M.a.s.l. ---

Date BA-IA

Landscape zone 1

Figures 19

Motif 19 cup marks

Description ---

Location The cup marked stone is located in the farmyard, it used to be in a stone wall. No provenance.

Documentation Fett 1946

Literature Mandt Larsen 1972; Fett 1973

Sandstå 1

Farm Sandstå

Municipality Ullensvang

RA ID no 101186-1

FK no 2/1

M.a.s.l. 700

Date BA-IA (LBA?)

Landscape zone 3

Figures 27-29

Motif 27 cup marks, 2 possible foot prints. This is a long carved out area that could be interpreted as two foot prints one after the other, or as two or more cup marks that have been carved close together, possibly with a very wide connecting groove. Grooves connect several cup marks.

Description The rock is eroded, but the cup marks are clear. Most are found on the northern part of the stone

Location At Stuaseter summer farm belonging to Sandstå. This area used to belong to Børve. Panel 1 is located on a stone a few metres E of one of the buildings.

Documentation Bakka 1951

Literature Mandt Larsen 1972

Sandstå 2

Farm Sandstå

Municipality Ullensvang

RA ID no 101187-1

FK no 2/2

M.a.s.l. 700

Date BA-IA

Landscape zone 3

Figures 7

Motif 7 cup marks

Description Flat on top, the cup marks are found on the sides and not on the top.

Location At Stuaseter summer farm belonging to Sandstå. This area used to belong to Børve. Panel 2 is located on a stone 15 metres below panel 1, on a slope.

Documentation Bakka 1951

Literature Mandt Larsen 1972; Adriansen 1997

Sandstå 3

Farm Sandstå

Municipality Ullensvang

RA ID no 101188-1

FK no 2/3

M.a.s.l. 700

Date BA-IA

Landscape zone 3

Figures 16-18

Motif 16-18 cup marks

Description The boulder is split in two, and most of the cup marks are located around the split, so this must have happened before the cup marks were made.

Location At Stuaseter summer farm belonging to Sandstå. This area used to belong to Børve. Panel 3 is located on a stone about 20 metres down the slope from the farm building.

Documentation Bakka 1951

Literature Mandt Larsen 1972; Adriansen 1997

Sekse 1

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 101196-1

FK no 9/1

M.a.s.l. 800

Date BA-IA

Landscape zone 3

Figures 10

Motif 10 cup marks, possibly more

Description On top of the stone

Location Øvste Fljotane is a rocky terrace. The path crosses the area, which was used as a resting place. Near the path there are four large boulders in pairs, on the two lowest boulders there are cup marks.

Documentation Bakka 1955, Adriansen 1997

Literature Mandt Larsen 1972

Sekse 2

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 101196-1

FK no 9/2

M.a.s.l. 800

Date BA-IA

Landscape zone 3

Figures 22

Motif 22 cup marks

Description The cup marks are found on the top of the boulder.

Location Øvste Fljotane is a rocky terrace. The path crosses the area, which was used as a resting place. Near the path there are four large boulders in pairs, on the two lowest boulders there are cup marks.

Documentation Bakka 1955, Adriansen 1997

Literature Mandt Larsen 1972

Sekse 3

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 101197-1

FK no 10/1

M.a.s.l. 679

Date BA-IA

Landscape zone 3

Figures 98

Motif 96 cup marks, 2 fragments of rings. At least three cup marks are connected by a groove.

Description The cup marks are found in three groups. Most are found on top and on the eastern side of the boulder.

Location Nedste Fljotene, a terrace crossed by the path. The panel is found on a large boulder located in the widest part of the terrace.

Documentation Bakka 1955, Adriansen 1997

Literature Mandt Larsen 1972

Sekse 4

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 130872-1

FK no 10/2

M.a.s.l. 684

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description The boulder is flat on top, the cup mark is in the centre.

Location Nedste Fljotene, a terrace crossed by the path. The panel is found on a boulder located 20 metres SE of panel 1.

Documentation Bakka 1955, Adriansen 1997

Literature Mandt Larsen 1972

Sekse 5

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 130873-1

FK no 10/3

M.a.s.l. 694

Date BA-IA

Landscape zone 3

Figures 32

Motif 32 cup marks

Description The stone is square and flat on top. The cup marks are found on two surfaces, one higher than the other, with 22 cup marks on the western surface and 10 cup marks on the eastern surface.

Location Nedste Fljotene, a terrace crossed by the path. The panel is found on a boulder located 75 metres NNV of panel 1.

Documentation Bakka 1955, Adriansen 1997

Literature Mandt Larsen 1972

Sekse 6

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 130874-1

FK no 10/4

M.a.s.l. 699

Date BA-IA

Landscape zone 3

Figures 3

Motif 3 cup marks

Description The stone is split into two, and part of the stone was missing in 1955.

Location Nedste Fljotene, a terrace crossed by the path. The panel is found on a boulder located 25 metres NE of panel 3, 5-6 metres below the path, in the scree. Not found in 1997

Documentation Bakka 1955, Adriansen 1997

Literature Mandt Larsen 1972

Sekse 7

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 101223-1

FK no ---

M.a.s.l. 800

Date BA-IA

Landscape zone 3

Figures 4

Motif 4 cup marks

Description Large boulder, 170 x 115 x 10-160 cm.

Location Øvste Fljotane is a rocky terrace. The path crosses the area, which was used as a resting place.

Documentation Adriansen 1997

Sekse 8

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 101225-1

FK no ---

M.a.s.l. 800

Date BA-IA

Landscape zone 3

Figures 4

Motif 4 cup marks

Description Large boulder (250 x 200 x 10-75 cm)

Location Øvste Fljotane is a rocky terrace. The path crosses the area, which was used as a resting place.

Documentation Adriansen 1997

Sekse 9

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 101221-1

FK no ---

M.a.s.l. 800

Date BA-IA

Landscape zone 3

Figures 4

Motif 4 cup marks

Description Large boulder, 360 x 250 x 50-80 cm
Location Øvste Fljotane is a rocky terrace. The path crosses the area, which was used as a resting place. The panel is found on a boulder at the northern end of Fljotane, on a steep slope.

Documentation Adriansen 1997

Sekse 10

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 101232-1

FK no ---

M.a.s.l. 800

Date BA-IA

Landscape zone 3

Figures 3-4

Motif 3-4 cup marks

Description Stone, 85 x 70 x 17-35 cm

Location Øvste Fljotane is a rocky terrace. The path crosses the area, which was used as a resting place. The panel is found on a small rock at the foot of a scree.

Documentation Adriansen 1997

Sekse 11

Farm Sekse Nedre

Municipality Ullensvang

RA ID no 101221-1

FK no ---

M.a.s.l. 368

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 possible cup mark

Description Large boulder, 170 x 130 x 15-80 cm

Location Nedste Fljotane, a terrace crossed by the path. The panel is found on a boulder

next to the brook before one arrives at the terrace.

Documentation Adriansen 1997

Skiftedalen 1

Farm Vinje

Municipality Etne

RA ID no ---

FK no 3

M.a.s.l. 90-100

Date LN-IA

Landscape zone 2

Figures 10

Motif 10 cup marks

Description The boulder slopes sharply to the ground, this is where the cup marks are located. Eroded.

Location A large boulder called "Skiftedalssteinen". It is the southernmost of the two large boulders N of the old barn. The panel is named Vinja IV in Mandt Larsen 1972.

Documentation Bøe 1932, Mandt Larsen 1966, Adriansen 1996

Literature Mandt Larsen 1972; Sør-Reime 1982; Vevatne 1996

Skiftedalen 2

Farm Vinja

Municipality Etne

RA ID no ---

FK no ---

M.a.s.l. 90-100

Date BA-IA

Landscape zone 2

Figures 1

Motif 1 cup mark

Description ---

Location On a small stone 35 metres N of Skiftedalen 1, near a clearance cairn, on the

border between Vinja and Bjørk.

Documentation Adriansen 1996

Literature Vevatne 1996

Skålevik 1

Farm Skålevik

Municipality Fitjar

RA ID no 25833 (refers to cairn)

FK no 2

M.a.s.l. 15

Date BA-IA (LBA)

Landscape zone 1

Figures 16

Motif 16 cup marks

Description The cup marks are closely spaced and cover one side of the stone

Location Found in a cairn at Hegrans promontoy at Skålevik farm. The cairn was excavated by Eyvind De Lange in 1912. In the centre of the cairn there was a layer of charcoal, cremated bones and quartz, and towards the edge iron was found. Later, the cup marked stone was found here, but no further information. Now in the Bergen museum, B08111

Documentation ---

Literature Bergen museum Årbok 1930; Mandt Larsen 1972

Stana

Farm Stana

Municipality Odda

RA ID no 104171-1

FK no 1/2

M.a.s.l. c. 20

Date BA-IA

Landscape zone 3

Figures 2

- Motif** 1 double crescent and 1 possible cup mark. Possibly modern.
- Description** The two lines are found near the edge of the outcrop, and there might have been a cup mark in the centre.
- Location** The images are found on an outcrop, Haugen, about 100 SV of the farm house and 20 metres from the road (in 1950). The images were not found in 2004 as the outcrop was covered in vegetation, and they are not verified.
- Documentation** Fett 1950, report in Bergen Museum archives

Støle

- Farm** Stødle
- Municipality** Etne
- RA ID no** 90164-1
- FK no** 1
- M.a.s.l.** 60
- Date** LN-BA
- Landscape zone** 2
- Figures** 353
- Motif** 302 cup marks, 18 rings, 2 concentric rings, 7 rings with radii, 2 complex rings, 3 ovals, 19 U-shapes
- Description** The images are spread along the top of the outcrop. The rock is eroded and cracked and some of the images are not easy to see.
- Location** On the Støle terrace, near the edge, there is a long and crescent-shaped outcrop on which the site is found. It is called "Helgaberget" (Eng: the holy rock). There are several barrows from the Bronze Age and Iron Age here, also a number of finds from the Bronze Age including a neck ring.
- Documentation** Mandt Larsen 1967, Bakka and Mandt Larsen 1969; Vevatne 1996
- Literature** Nicolaysen 1866; Bendixen 1898; Shetelig 1908; Mandt Larsen 1972; Sør-Reime 1982; Vevatne 1996

Svolland 1

- Farm** Svolland
- Municipality** Vindafjord (Ølen)
- RA ID no** 73020
- FK no** 1
- M.a.s.l.** 7-10

Date BA

Landscape zone 2

Figures 7

Motif 1 ship, 1 fragment of a ship, 1 ring, 1 fragmentary and 2 rings with four radii, unidentifiable lines

Description The panel is almost vertical. The rings and the ship are clear, but the other images are harder to see.

Location At Svolland, on a rock outcrop on the eastern side of Naustvika bay. The panel is found on the southern part of the outcrop, facing the are in front, rather than the sea.

Documentation Mandt Larsen 1970

Literature Mandt Larsen 1972

Svolland 2

Farm Svolland

Municipality Vindafjord (Ølen)

RA ID no 15816

FK no 1

M.a.s.l. 15

Date BA-IA

Landscape zone 2

Figures 9

Motif 9 cup marks

Description The cup marks are found in two groups, separated by a crack.

Location A rock outcrop about 20 metres E of panel 1

Documentation Sør-Reime and Skår 1981

Svolland 3

Farm Svolland

Municipality Vindafjord (Ølen)

RA ID no 45482

FK no

M.a.s.l. 15

Date BA-IA

Landscape zone 2

Figures 2

Motif 2 cup marks

Description ---

Location Found on the same rock outcrop as panel 2, about 15 metres E of panel 2.

Documentation Sør-Reime and Skår 1981

Sævarhagen 1

Farm Sævarhagen

Municipality Jondal

RA ID no 105612-1

FK no 4/1

M.a.s.l. 5

Date BA-IA

Landscape zone 2

Figures 3

Motif 3 cup marks

Description ---

Location On a low rock outcrop near the boathouses, 20 metres from the shore.

Documentation Mandt Larsen 1967, Gundersen 2000

Literature Mandt Larsen 1972

Sævarhagen 2

Farm Sævarhagen

Municipality Jondal

RA ID no 105612-2

FK no 4/2

M.a.s.l. ---

Date BA-IA

Landscape zone 2

Figures 6

Motif 6 cup marks

Description Large, flat stone in secondary position

Location The panel is found on a stone in the quay. No provenance.
Documentation Mandt Larsen 1970, Gundersen 2000
Literature Mandt Larsen 1972

Tesdal 1

Farm Tesdal
Municipality Etne
RA ID no 90151-1
FK no 4/1
M.a.s.l. 120-130
Date BA-IA

Landscape zone 2

Figures 22
Motif 22 cup marks
Description Flat stone, 2 x 1.50 x 50 cm

Location On a in an area called "Bleikja", a rocky area used as pasture. The panel is found on a stone just N of the largest boulder here.

Documentation Fett 1962; Mandt Larsen 1966

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Tesdal 2

Farm Tesdal
Municipality Etne
RA ID no 90147-1
FK no 4/2
M.a.s.l. 150
Date BA-IA

Landscape zone 2

Figures 13
Motif 13 cup marks, 6 of which have connecting grooves
Description The panel is horizontal and square.

Location Located 156 metres NE of panel 1 on a flat rock that is almost completely covered by vegetation and is not easy to find.

Documentation Fett 1962; Mandt Larsen 1966

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Tesdal 3

Farm Tesdal

Municipality Etne

RA ID no 90129-1

FK no ---

M.a.s.l. 120

Date BA-IA

Landscape zone 2

Figures 8

Motif 8 cup marks

Description The cup marks are located on the top of the boulder, and five cup marks form a row.

Location A large boulder 8 metres WNW of the barn, in the farm yard. It is split in two.

Documentation Gjerde 2000, note in the archives at Bergen Museum

Literature Gjerde 2000

Tokheimskaret 1

Farm Tokheim

Municipality Odda

RA ID no ---

FK no ---

M.a.s.l. 843

Date BA-IA

Landscape zone 3

Figures 30

Motif 30 cup marks

Description Large boulder

Location The boulder is located north of the river at Tokheimskaret in Stølsdalen valley. Here there is an area used as a summer farm, there are remains of houses and cooking pits, with dates from the Viking Age and Medieval period, as well as two rock shelters, of which one has Bronze Age dates. The boulder is found close to a scree.

Documentation Valvik and Nøttvedt 1999

Trones 1

Farm Trones

Municipality Ullensvang

RA ID no 127259

FK no ---

M.a.s.l. 400?

Date BA-IA

Landscape zone 3

Figures 26-30

Motif 26-30 cup marks

Description large boulder, 2.2 x. 1.7 x. 0.35 cm

Location The stone is located on a terrace in an area used as a summer farm. The farm Trones is located about 260 m.a.s.l..

Documentation Adriansen 1997

Tveiten

Farm Tveiten

Municipality Jondal

RA ID no 105636-1

FK no 3

M.a.s.l. 20-22

Date BA-IA

Landscape zone 2

Figures 10

Motif 10 cup marks

Description The cup marks are spread on a flat stone, 250 x 113 cm.

Location On a stone in a garden at Tveiten in Herand in Jondal, not far from Bakke 1-6

Documentation Bakka and Mandt Larsen 1969, Gundersen 2000

Literature Mandt Larsen 1972

Tveiti

Farm Tveit

Municipality Ullensvang

RA ID no 130854-1

FK no 2

M.a.s.l. 320

Date BA-IA

Landscape zone 3

Figures 73

Motif 73 cup marks, some are almost square, one double cup mark/two cup marks connected by a wide groove

Description The cup marks are small and spread on top of the boulder, 600 x 260 x 150-350 cm

Location In forest about 60-70 metres E of the new track.

Documentation Adriansen 1996

Literature Fett 1975

Tveito 1

Farm Tveito

Municipality Etne

RA ID no 90139-1

FK no 1/1

M.a.s.l. 110

Date BA-IA

Landscape zone 2

Figures 75

Motif 75 cup marks

Description Several of the cup marks are arranged in rows.

Location The site is found on an outcrop 3 metres E of the farm house. Another panel, Tveito 2, has been documented, but the cup marks are natural. I have not included it here.

Documentation Bøe 1932, Mandt Larsen 1966, Mandt and Hauge Riisøen 1994

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Ullensvang 1

Farm Ullensvang

Municipality Ullensvang

RA ID no 112273-1

FK no 3

M.a.s.l. 435

Date BA-IA

Landscape zone 3

Figures 18-20

Motif 18-20 cup marks

Description Large boulder, 270 x 270 x 80-200 cm. The cup marks are spread in groups and some in rows. There is one giant cup mark, 11 cm across.

Location At Stuaseter summer farm belonging to Ullensvang farm. The stone is located at the northern corner of the farm building

Documentation Bakka 1951

Literature Mandt Larsen 1972

Utbjoa 1

Farm Utbjoa

Municipality Vindafjord (Ølen)

RA ID no 25525-1

FK no 1/4

M.a.s.l. 5

Date LBA

Landscape zone 2

Figures 3

Motif Two boats and one ring with radii. One of the boats is reminiscent of Mediterranean boats.

Description Small vertical panel, facing the fjord. Several horizontal cracks in the rock, the keel of figure 2 (the largest ship) is parallel to a crack.

Location A small outcrop that drops into the sea, the outfield at Innbjoa. There are two cairns close by.

Documentation Bakka 1953, Mandt Larsen 1967, 1969

Literature Mandt Larsen 1972

Utbjoa 2

Farm	Utbjoa
Municipality	Vindafjord (Ølen)
RA ID no	6444-1
FK no	1/5
M.a.s.l.	5
Date	BA-IA
Landscape zone	2
Figures	1
Motif	Unidentifiable line figure, possible a fragmentary ship.
Description	Small vertical panel 4 metres to the east of panel 1. There are horizontal cracks in the rock. The figure is located near the foot of the panel, below the lowest crack.
Location	A small outcrop that drops into the sea, the outfield at Innbjoa. There are two cairns close by.
Documentation	Bakka 1953, Mandt Larsen 1967, 1969
Literature	Mandt Larsen 1972

Utbjoa 3

Farm	Utbjoa
Municipality	Vindafjord (Ølen)
RA ID no	45483-1
FK no	1/6
M.a.s.l.	5
Date	LBA
Landscape zone	2
Figures	14
Motif	One arm and hand, possibly of more recent date, ten boats with and without gunwale, one ring with four radii and one crescent shape that may have been a ring with radii.
Description	The panel is horizontal, and difficult to discern from a distance. There are several cracks in the rock, which do not affect the images. The main group of ships is located between two cracks.
Location	Hovlandstø, a bay at Innbjoa. The panel is located about 5 metres east of the Seiastovo hill, on which there is a cairn. Good view of the fjord and surrounding landscape.

Documentation Bakka 1953, Mandt Larsen 1967, 1969

Literature Mandt Larsen 1972

Utbjoa 4

Farm Utbjoa

Municipality Vindafjord (Ølen)

RA ID no 45484-1

FK no 6/2

M.a.s.l. 20

Date EBA

Landscape zone 2

Figures 3

Motif Three B1 type boats with no gunwale.

Description Low, vertical rock outcrop.

Location At Bjoavågen bay, near a boathouse and near the shore. Panel 5 is located close by.

Documentation Bakka 1953; Mandt Larsen 1967, 1969

Literature Mandt Larsen 1972

Utbjoa 5

Farm Utbjoa

Municipality Vindafjord (Ølen)

RA ID no 73021-1

FK no 6/1

M.a.s.l. 10-20

Date BA-IA

Landscape zone 2

Figures 28

Motif 28 cup marks

Description Horizontal rock outcrop

Location The outcrop is located at Bjoavågen bay, and has been used as a path along the shore. Panel 4 is located close by.

Documentation Bakka 1953; Mandt Larsen 1967, 1969

Literature Mandt Larsen 1972

Utbjoa 6

Farm Utbjoa

Municipality Vindafjord (Ølen)

RA ID no 55222-1

FK no 2

M.a.s.l. 20

Date BA-IA

Landscape zone 2

Figures 5

Motif 5 cup marks

Description Small outcrop

Location Rock outcrop 150 metres WSW of Tjødno.

Documentation Bakka 1953; Mandt Larsen 1967, 1969

Literature Mandt 1972

Utne 1

Farm Utne

Municipality Ullensvang

RA ID no 127257-1

FK no 4/1

M.a.s.l. 650

Date BA-IA

Landscape zone 3

Figures 20

Motif 20 cup marks

Description A large boulder, 295 x 155 cm, the cup marks are spread on top

Location The panels are found at Dettebakken, an old disused summer farm about 650 m.a.s.l. in Utnesdalen valley. Above the buildings there is a rocky area below a scree, where the panels are found.

Documentation Bakka 1955, Adriansen 1997

Literature Bakka 1963; Mandt Larsen 1972

Utne 2

Farm Utne

Municipality Ullensvang

RA ID no 127258-1

FK no 4/2

M.a.s.l. 650

Date BA-IA

Landscape zone 3

Figures 2

Motif 2 cup marks

Description Large boulder, 470 x 450 x 160 cm.

Location The panels are found at Dettebakken, an old disused summer farm about 650 m.a.s.l. in Utnesdalen valley. Above the buildings there is a rocky area below a scree, where the panels are found. The panel is found on a boulder 75 metres ENE of panel 1

Documentation Bakka 1955, Adriansen 1997

Literature Bakka 1963; Mandt Larsen 1972

Utne 3

Farm Utne

Municipality Ullensvang

RA ID no 127257-1

FK no ---

M.a.s.l. 650

Date BA-IA

Landscape zone 3

Figures 1

Motif 1 cup mark

Description Stone, 80 x 40 cm

Location The panels are found at Dettebakken, an old disused summer farm about 650 m.a.s.l. in Utnesdalen valley. Above the buildings there is a rocky area below a scree, where the panels are found. Panel 3 is located on a stone 3,5 metres E of

panel 1. The registration number in the Askeladden database refers to panels 1 and 3.

Documentation Adriansen 1997

Vangdal 1

Farm Vangdal

Municipality Kvam

RA ID no 97522-1

FK no 2/1

M.a.s.l. 10

Date EBA

Landscape zone 2

Figures 22

Motif 14 ships, 4 fragments of ships, two oval rings, 1 cup mark and one unidentifiable line figure.

Description A vertical panel, with some cracks and horizontal quartz veins. The ships follow the veins, giving the impression of "sailing" on them. The images are relatively easy to see despite an eroded surface. All ships are A1/B1-types. One possible superposition, a curved line is superposed on an A1-ship.

Location At the foot of a large cliff, Salthammaren". A track leads down from the main road, and ends about 40-50 metres from the panel. The area is hilly with small terraces. Good view of the fjord across to Jondal and the Folgefonna glacier is visible.

Documentation Bøe 1936; Mandt Larsen 1967

Literature Mandt 1972; Gjerde 1998; Wrigglesworth 2006

Vangdal 2

Farm Vangdal

Municipality Kvam

RA ID no 97522-2

FK no 2/2

M.a.s.l. 25

Date STA

Landscape zone 2

Figures 12

Motif Five animals, of which 2 are complete, deer, possibly reindeer. 2 anthropomorphic images, 6 unidentifiable collections of lines.

Description The panel is almost vertical. Several cracks in the stone, some of the animals cluster around one vertical crack. The images are lightly pecked, and only the two complete animals at the top of the panel are relatively easy to see. The remaining images are almost impossible to see unless the light is at an angle.

Location On Salthammaren cliff at the edge of a steep drop, facing the fjord. A path leads down to the panel from the road and parking area, and a platform has been built in front of the panel. Good view of the fjord.

Documentation Bakka 1964; Bakka and Mandt Larsen 1967, 1969

Literature Mandt Larsen 1972; Bakka 1973

Vangdal 3

Farm Vangdal

Municipality Kvam

RA ID no 97522-3

FK no ---

M.a.s.l. 4-5

Date IA?

Landscape zone 2

Figures 4

Motif 1 oval ring, 2 square figures, 1 figure consisting of wavy lines, which could also be classified as a line figure.

Description The panel measures about 1 metre across. The images are clearly visible as the lines are deep.

Location Small panel on a sloping rock outcrop on the point of the promontory where Salthammaren is located, to the SE of panel 2.

Documentation Lødøen 1997

Literature ---

Ve 1

Farm Ve

Municipality Tysnes

RA ID no ---

FK no 1

M.a.s.l. ---

Date BA-IA

Landscape zone 2

Figures 5

Motif 5 cup marks

Description Slab, previously used as a doorstep.

Location The cup marked stone was found on a slope behind the farm. No provenance.

Documentation De Lange 1916

Literature Mandt Larsen 1972

Vestbøstad 1

Farm Vestbøstad

Municipality Fitjar

RA ID no 105517-1

FK no ---

M.a.s.l. 24

Date LBA

Landscape zone 1

Figures 32

Motif 20 ships, 1 cup mark, 11 fragmentary lines, possibly ships.

Description The panel is steep and almost vertical, where most of the images are located. On top the rock is flat, and here there is a small area with ship images. Several cracks, as well as some relatively superficial damage caused by a JCB. Some of the images are relatively easy to spot as the lines are wide, but most are hard to see unless the light is slanted, especially the ship on the flat area on top.

Location On outcrop next to farm track, below barn. View to grazing area/outfields and a lake. Cairns in the vicinity, approx. 800-900 m.

Documentation Wrigglesworth 2002

Literature Wrigglesworth 2001, 2002

Vik 1

Farm	Vik
Municipality	Kvam
RA ID no	97447
FK no	3
M.a.s.l.	350
Date	BA-IA
Landscape zone	2
Figures	10
Motif	1 ship and 9 cup marks
Description	The ship and the cup marks are found on two separate surfaces, panel A and B. The ship is found about 2 m above the ground in the NW area, while the cup marks are located above the stones in the centre of the rock shelter.
Location	Vikhelleren, a rock shelter in Fitjadalen valley, 350 m.a.s.l..
Documentation	Fett and Bakka 1951, Bakka and Mandt Larsen 1969
Literature	Mandt Larsen 1972

Vik 2

Farm	Vik
Municipality	Kvam
RA ID no	97447
FK no	3
M.a.s.l.	350
Date	BA-IA
Landscape zone	2
Figures	10
Motif	10 cup marks
Description	----
Location	On a boulder in front of the Vikshelleren rock shelter
Documentation	Bakka and Mandt Larsen 1969
Literature	Mandt Larsen 1972

Vik 3

Farm Vik
Municipality Kvam
RA ID no 97447
FK no 3
M.a.s.l. 350
Date BA-IA
Landscape zone 2
Figures 8
Motif 8 cup marks
Description ---
Location On a boulder in front of the Vikshelleren rock shelter
Documentation Bakka and Mandt Larsen 1969
Literature Mandt Larsen 1972

Vik 4

Farm Vik
Municipality Kvam
RA ID no 97447
FK no 3
M.a.s.l. 350
Date BA-IA
Landscape zone 2
Figures 6
Motif 6 cup marks (might be natural)
Description ---
Location On a boulder in front of the Vikshelleren rock shelter
Documentation Bakka and Mandt Larsen 1969
Literature Mandt Larsen 1972

Vikøy 1

Farm	Vikøy
Municipality	Kvam
RA ID no	97471-1
FK no	8
M.a.s.l.	10-15
Date	BA-IA
Landscape zone	2
Figures	20
Motif	20 cup marks
Description	The cup marks are spread in six groups over an area of 15 x 15 metres. The rock is eroded, several exfoliations.
Location	The site is found on a rock outcrop on the shore, close to an industrial area.
Documentation	Bakka and Mandt Larsen 1969
Literature	Mandt Larsen 1972

Vinje 1

Farm	Vinja
Municipality	Etne
RA ID no	90133-1
FK no	2/1
M.a.s.l.	90
Date	LN-BA
Landscape zone	2
Figures	89
Motif	1 -shape, 24 rings including concentric rings, 2 rings with radii, 1 complex ring, 1 oval, 59 cup marks, 1 unidentifiable figure, fragments
Description	The images are found on the slanting surface, the rock is eroded and the images are difficult to see. Two small excavations have been undertaken here, Hinsch 1952 and Bakka 1958. Charcoal and flint (B11196), as well as a flint arrow of LN-BA type were found (B10706). A field course was held here in 1981, when a few trenches were opened.
Location	The panel is found on a large boulder 20 metres from the barn, it is about 4 metres at its highest. It is called "Duesteinen".
Documentation	Fett 1938; Bøe and Straume; Mandt Larsen 1967;

Mandt and Hauge Riisøen 1996

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Vinje 2

Farm Vinja

Municipality Etne

RA ID no 90130-1

FK no 2/2

M.a.s.l. 90

Date BA-IA

Landscape zone 2

Figures 12

Motif 12 cup marks

Description In 1952 a test pit was dug in front of the boulder, no finds were made (Hinsch 1952).

Location The panel is found on a large boulder 100 metres N of Vinje 1 on the other side of the road, it is called "Hamarsteinen"

Documentation Fett 1938, Bøe and Straume 1952, Mandt Larsen 1966, Mandt and Hauge Riisøen 1996

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Vinje 3

Farm Vinja

Municipality Etne

RA ID no 90143-1

FK no 2/3

M.a.s.l. 120

Date LN-BA

Landscape zone 3

Figures 22

Motif 20 cup marks, two fragmentary rings, one of which has fragments of radii.

Description The rock is strongly eroded and the images are difficult to see.

Location N of panel 2, there is a large hill called Hamaren, panel 3 is found on a

boulder below the cliff, and below the track leading up to it.

Documentation Bøe and Straume 1952, Mandt Larsen 1966, Mandt and Riisøen 1996

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Volme (Frette)

Farm Volme

Municipality Etne

RA ID no ---

FK no ---

M.a.s.l. ---

Date BA-IA

Landscape zone 2

Figures 4

Motif 4 cup marks

Description ---

Location The site is called Frette in Mandt Larsen 1972. At Volme farm, a stone with cup marks was found. It was used to cover a drainage ditch, and has since not been found and has not been documented.

Documentation ---

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Øvernes 1

Farm Øvernes

Municipality Etne

RA ID no ---

FK no 3

M.a.s.l. 70-80

Date BA-IA

Landscape zone 2

Figures 1

Motif 1 cup mark

Description ---

Location A stone in the foundations of the old barn. It has not been found since it was

first documented in 1954. No provenance.

Documentation Bakka 1954

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Øvernes 2

Farm Øvernes

Municipality Etne

RA ID no 90150-1

FK no ---

M.a.s.l. 70-80

Date BA-IA

Landscape zone 2

Figures 2-3

Motif 2-3 cup marks

Description Long, rectangular slab, 0.6 x 1.8 metres.

Location The slab is used as a bench outside the old farm house. No provenance.

Documentation Adriansen 1996

Literature Vevatne 1996; Gjerde 2000

Øyarden 1

Farm Flote

Municipality Etne

RA ID no 90127-1

FK no 5/2

M.a.s.l. 100

Date BA-IA

Landscape zone 2

Figures 4

Motif 4 cup marks

Description The rock is eroded.

Location The panel is found on a large boulder near the edge of the terrace, 25 metre W of the farm house.

Documentation Bakka 1956, Mandt Larsen 1966

Literature Fett 1963; Mandt Larsen 1972; Sør-Reime 1982; Vevatne 1996

Øyarden 2

Farm Flote

Municipality Etne

RA ID no 90127-1

FK no 5/3

M.a.s.l. 100

Date BA-IA

Landscape zone 2

Figures 1

Motif 1 cup mark

Description The cup mark is found on top of the stone

Location 14 metres N of panel 1, and 18 metres W of the farm house, on a small boulder.

Documentation Bakka 1956, Mandt Larsen 1966

Literature Fett 1963; Mandt Larsen 1972; Sør-Reime 1982; Vevatne 1996

Øyarden 3

Farm Flote

Municipality Etne

RA ID no 90132-1

FK no 5/1

M.a.s.l. 140

Date BA-IA

Landscape zone 2

Figures 7

Motif 7 cup marks

Description Horizontal

Location The panel is found on a flat rock about 90 metres up the slope from the farm yard, in an area called "Ingridslåtten".

Documentation Bakka 1956, Mandt Larsen 1966

Literature Fett 1963; Mandt Larsen 1972; Sør-Reime 1982; Vevatne 1996

Øygardsflote 1

Farm Flote

Municipality Etne

RA ID no 90173-2

FK no 3/1

M.a.s.l. 100

Date BA-IA

Landscape zone 2

Figures 7

Motif 7 cup marks

Description The cup marks are found on top of the boulder, the western part. 400 x 250 x 100 cm.

Location At Øygardsflote, a terrace on the steep side of the valley. This panel is named Flote II in Mandt Larsen 1972. The panel is found on a large boulder, about 5 metres W of a cairn.

Documentation Bøe and Starume 1963, Mandt Larsen 1966

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Øygardsflote 2

Farm Flote

Municipality Etne

RA ID no 90173-3

FK no 3/2

M.a.s.l. 100

Date BA-IA

Landscape zone 2

Figures 18

Motif 18 cup marks

Description The cup marks are found on the eastern and southern side.

Location Large boulder known as "Sleahidleren", 10x8 metres, 60 metres S of panel 1. The boulder forms a rock shelter on its southern side. Flote III in Mandt Larsen 1972. In Vevatne 1996 and Gjerde 2000 this panel is named Øygardsflote 4.

Documentation Bøe and Starume 1953, Mandt Larsen 1966

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Øygardsflote 3

Farm Flote

Municipality Etne

RA ID no 90173-4

FK no 3/4

M.a.s.l. 100

Date BA-IA

Landscape zone 2

Figures 8

Motif 8 cup marks

Description Flat rock inside the rock shelter.

Location Panel 3 is found on a rock that forms the floor inside the rock shelter. Flote IV in Mandt Larsen 1972. In Vevatne 1996 and Gjerde 2000 this panel is named Øygardsflote 2.

Documentation Bøe and Straume 1953, Mandt 1966

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Øygardsflote 4

Farm Flote

Municipality Etne

RA ID no 90173-5

FK no 3/3

M.a.s.l. 100

Date BA-IA

Landscape zone 2

Figures 1

Motif 1 cup mark

Description

Location The stone is found just W of Sleahidleren. This panel is named Flote V in Mandt Larsen 1972 and Øygardsflote 3 in Vevatne 1996 and Gjerde 2000

Documentation Bøe and Straume 1953, Mandt Larsen 1966

Literature Fett 1963; Mandt Larsen 1972; Vevatne 1996

Øygardsflote 5

Farm Flote

Municipality Etne

RA ID no ---

FK no ---

M.a.s.l. 100

Date BA-IA

Landscape zone 2

Figures 1

Motif 1 cup mark

Description Small stone

Location The stone was found 6.9 metres from panel 1 and 2.6 metres from the cairn. It is likely to have come from the cairn.

Documentation Gjerde 2000, note in Archives at Bergen Museum

Literature Gjerde 2000

Åkra 1

Farm Åkra kirke

Municipality Kvinnherad

RA ID no 95128

FK no ---

M.a.s.l. ---

Date Medieval

Landscape zone 2

Figures 25

Motif 25 cup marks

Description Trapezoid flat stone. According to tradition, coffins rested on the stone while the grave was being dug.

Location At Åkra churchyard

Documentation Gundersen 2004

Literature Fett 1963; Mandt Larsen 1972

Årsand 1

Farm Årsand

Municipality Kvinnherad

RA ID no 35828-1

FK no 1

M.a.s.l. 50-60

Date BA/IA?

Landscape zone 2

Figures 62-65

Motif 11 rings, 1 U-shape, 4 rings with radii, 1 complex ring, 4-6 anthropomorphic figures, 2 triangles, 4-5 squares, 1 line figure, 4 crosses, 2 figures of eight, the rest unidentifiable motifs

Description Paintings located in a small rock shelter. The depictions are painted on several small surfaces, some more exposed than others. 62 figures recorded by Bøe, in addition various small dots or blobs of paint that have not been given a number. Numbering should be revised.

Location "Geithidleren", a small rock shelter

Documentation Bøe 1940

Literature Bøe 1940; Mandt Larsen 1972.

Appendix B: Graves

The graves that can be dated to the Bronze Age are presented in alphabetical order, and ordered by farm. The information provided here is based on information from reports in the archives at Bergen Museum, the Askeladden database, and Per Fett's publications.

Below, a specific set of information is provided for each site and panel. RA ID no refers to the identification number in the Askeladden database. Some graves do not have a number, as they no longer exist, while other graves that have been removed have got a number. FK no refers to Per Fett's numerical ordering of sites in his booklets. Literature refers to reports and publications where the grave is mentioned. More references are available in Per Fett's booklets.

RA ID no 16127
FK no 1/1
Farm Breivikjø
Municipality Fitjar
Width 10 m
Height 1 m
Date LBA
M.a.s.l. 10 m

Location

At Rosneset promontory, about 30 m from the sea.

Finds

B06273, pottery shards

Construction

Excavated by De Lange in 1908. Close to the edge he found a small cist measuring 0.75 x 0.45 metres, made from slabs. Inside, there were shards of four pots (B06273): shards of two pots and cremated bones were next to the southern gable, a pot was placed next to the eastern side, and a pot containing cremated bones was placed in the centre of the cist (De Lange 1913). The cist was also half-filled with soil. The cairn was partially damaged before the excavation; stones had been removed, possibly to build a stone fence in the vicinity.

Literature De Lange 1913; Fett 1973; Østerdal 1999

RA ID no 97489
FK no 3/1
Farm Eide
Municipality Kvam
Width 17x8.5 m
Height 1.3 m
Date LBA-IA
M.a.s.l. 20 m

Location

On a promontory, Straumstein, S of Skuteviken bay.

Finds

B 12021 - burial consisting of cremated bones, found in a cist in 1967. Likely to be Iron Age.

Construction

The cairn was excavated in 1905 and 1967. In 1905, Haakon Schetelig found a small cist in a seemingly undisturbed part of the cairn; 4.5 m from the southern edge a cist measuring 0.6 x 0.37 m was found. The bottom was covered by beach pebbles (Nor. "fjærestein"). No finds. Several slabs were found in the disturbed part of the cairn, indicating more burials. In 1967, the cairn was excavated and removed. A cist consisting of 4 large slabs was found 4 m from the eastern edge, the slabs collapsed. Cremated bones and beach pebbles were spread underneath the slabs, inside and outside the cist, which was estimated by the excavator to have measured 1.7 m x 0.6 m and had a depth of 0.5 m. It was impossible to determine whether the bones came from an earlier burial or from an urn inside the cist. No charcoal or pottery shards were found.

Literature Schetelig 1910:3-4; Fett 1954b; Rolfsen 1967

RA ID no 97479
FK no 3/2
Farm Eide
Municipality Kvam
Width 10 m
Height 1 m
Date EBA-LBA
M.a.s.l. 20 m

Location

On a promontory, Straumstein, S of Skuteviken bay, about 120 m SSE of 3/1.

Finds

B5932 from burial 3. Late Bronze Age, two urns containing cremated bones and fragment of a bronze object, which was poorly preserved and could not be identified. One urn was well preserved but had cracked and spilt its contents. Dated to the LBA. The second urn was almost disintegrated and was in pieces which were mixed with the bones. The bronze object was found underneath the bones, and appeared to have been laid down separate from the urns.

Construction

The top of the cairn was slightly disturbed. It was built around an outcrop, the top of which was visible. The stones were beach stones (Nor. "rullestein"). The cairn contained three burials.

Burial 1: This was found in the eastern section of the cairn, close to the edge. It was discovered by some boys who took stones from the cairn and threw them off the promontory into the sea. They uncovered the gable-end of a cist, where the slab was out of position, creating an opening, and inside they found a human skull which they threw into the sea. Schetelig later searched for the skull from a boat, but the sea was too deep. The cist measured 2m x 0.65 m wide, and was 0.33 m deep. It was wider at the eastern end. There was a slab at either end, while the rest of the cist was dry walled, and covered by three slabs. The bottom was beach stones with smaller stones in-between to create a smooth surface. Remains of bark and inhumed bones were found here.

Burial 2: a cist 1.4 m, 0.6 m wide in the southern end and 0.40 m at the other, 0.23 m deep was found in the western section of the cairn. It was dry walled except for the southern end which was a slab. The bottom was beach stones.

Burial 3: a small cist set between the top and the bottom of the cairn. It was covered by two slabs, one on top of the other. The cist consisted of five slabs, four of which were set on top of the fifth. Small round beach pebbles were strewn over the bottom slab. Two urns and the remains of a bronze object were found.

Literature Schetelig 1910; Fett 1954b

RA ID no 35533
FK no 2/1
Farm Gjerstad
Municipality Tysnes
Width 15 m
Height 1,7 m
Date LBA
M.a.s.l. 8-10 m

Location

At Gjerstadneset promontory, 50 m from the point.

Finds

Clay urn (B6757), broken.

Construction

The cairn was excavated by Eyvind de Lange in 1914. Two cists made from slabs were found: cist 1 was found 3.5 m from the northern edge, measuring 0.55 x 0.25 m NW-SE. Only nut shells were found. Cist 2 was found 1.75 m NE of 1, measuring 0.5 x 0.4 m. Here nut shells and a clay pot were found.

Literature De Lange 1914; Fett 1954a

RA ID no -
FK no 1/4
Farm Grindheim
Municipality Etne
Width 15-17 m
Height 1,5 m
Date LBA
M.a.s.l. 75-80 m

Location

Kyrkjehaugen. Near the church at Grindheim.

Finds

B7656a-b: ceramic vessel and bronze razor

Construction

The barrow was ploughed out and severely damaged when a small cist was discovered. Inside, there was an urn containing cremated bones and a bronze razor, of a type dated to around period 4 -5. The cist was located off-centre in the mound, and measured 0.5 x 0.25-0.30 metres and was filled with soil and charcoal. The urn was placed in the centre of the cist.

Literature Bøe 1926; Fett 1968; Vevatne 1996; Nordenborg Myhre 1998

RA ID no -
FK no 1/1
Farm Hystad
Municipality Stord
Width 12.5x14.5 m
Height 0,5m
Date BA
M.a.s.l. 5-10 m

Location

On an outcrop close to the sea at Aslakvikjo bay. The cairn was excavated and removed in 1976. There would have been a good view of the fjord.

Finds

B12546/1-3. 1: Cremated and inhumed bones.2: Charcoal, 3: two blue mussels (*mytilus edulis*)

Construction

Excavated in 1885 by Ross, who uncovered a 2 m long dry walled cist which had been placed on the rock. Disintegrating inhumed bones were spread on the rock, forming the bottom of the cist. The cairn was excavated and removed in 1976. According to the report the cairn was built of round stones with some flat slabs in-between, and soil was mixed in, which would indicate an Iron Age date.

Two additional cists were found in 1976. Cist 2 was found in the eastern section of the cairn, 0.5 m from cist 1. Built from slabs set onto the rock, the bottom consisted of yellow-grey gravel, 2.4 m long, 0.5 m wide, inner measurement is 2 x 0.5 m, 0.5 m deep. Fragments of cremated bone and charcoal were found spread along the length of the cist. 0.35 m S of the SW corner of the cist remains of inhumed bones were found in an area 0.1 x 0.3 m on top of eroded rock. Cist 3 was found in the W section of the cairn, 2.5 m from its centre. It was quadratic, 0.5 m and built on the rock, and was covered by two slabs one on top of the other. The upper slab was 2 x 0.6 m. The lower slab measured 0.80 x 0.24m and was positioned over the eastern part of the cist. On top of the slab there were blue mussels mixed with soil. The cist was constructed from round stones and two slabs, inside there was yellow-brown beach gravel mixed with fragments of cremated bone and charcoal. The cairn was built on rock, and cracks and depressions had been filled in. The centre of the cairn was built in a flat area, 6 x 6 m, in which cist 1 and 2 were located, while cist 3 was located outside this area where the rock sloped down.

Literature Bakka 1959,1972; Fett 1967; Ågotnes 1976

RA ID no -
FK no 1/4
Farm Hystad
Municipality Stord
Width 11 m
Height 0.8 m
Date BA
M.a.s.l. 10-15 m

Location

At Askjevikjo bay, 20 m from the sea. Removed, the area is now industrial. There would have been a good view of the fjord.

Finds

None

Construction

According to Bakka's 1959 survey report there was a wall with a façade to the W that could be seen N of the centre, about 1 m in length, and that there appeared to be an inner circular wall 6 m across. When the cairn was excavated in 1971, the excavators could not identify the walls. There was some damage to the NW section as stones had been removed. The western part of the cairn turned out to consist of an outcrop running NE-SW. The excavation uncovered a rectangular wall where the outcrop made up the fourth side of the rectangle. The walls leading out from the outcrop were constructed from flat stones, while the wall that connected them was built from round and angular stones. The walls had a façade facing outwards, as the flat sides of the stones in the construction faced outwards. Charcoal was found spread within the walls, in the SW section. A cist was found in the eastern part within the walls. It was 2 m in length, 0.6 m wide and 0.5 m deep, constructed from slabs. One slab made up the length of one side while the other was made up from two slabs, one slab at either end and smaller flat stones appear to have been used for supporting the slabs. The charcoal was spread between the SW end of the cist and the wall. No other finds. The cist appeared to have been opened at some point.

Literature Bakka 1959,1972; Fett 1967; Fjelltveit and Jansen 1971

RA ID no -
FK no 2/1
Farm Hystad
Municipality Stord
Width 9.5 m
Height 1.25 m
Date EBA-LBA
M.a.s.l. 5-6 m

Location

On an outcrop on the western side of the Valevågen bay. There would have been a good view of the fjord and the bay.

Finds

B11182: Urn with cremated bones

B11183: Urn with cremated bones and shells (*patella vulgata*, Eng. Common limpet).

Both urns are similar, low with concave neck and decorated with fingernail marks, set in horizontal rows. LBA

Construction

The cairn was excavated in 1958. There was some damage, stones had been removed, and a cist was visible, cist 1. A total of five burials were found. The bottom layer of the cairn consisted of large stones, with smaller stones on top. About 1.5-2 m from the edge of the cairn there was a wall, 1.25 m at its highest. The wall consisted of large stones set in part on rock, part on the original ground. It was slightly rhombic, with rounded corners and slightly convex sides, measuring 6.6 m NE-SW in length and 5-5.5 m across. The wall had a façade, the flat side of the stones faced outwards. Inside there was only stones. Cist 1 was located in the centre of the area enclosed by the wall. The cist was 1.6 m in length, 0.45 and 0.5 m at either end, 0.5 m deep, and constructed using large stones with flat sides facing inwards. The bottom was bare rock, but a thin layer of soil underneath the stones forming the cist indicates that it might have been set on soil.

Burial 2 was located outside the wall to the NW, next to the wall, with a slab up against the wall, the remaining three sides were drywalled using flat stones, set on top of a bottom slab. The covering slab was 0.9 x 0.65 m. The cairn was added to at this point, the stones outside the wall were added at the same time as burial 2, according to the excavator.

Burial 3 was located 1 m NE of 2, close to the wall and was constructed of four slabs, 0.4-0.5 x 0.28 m; the gable slabs set on top of the bottom slab, which was a blueish slate. Inside, a broken clay urn containing cremated bones and shells was found (B11183), set 0.25-0.3 m over the bottom of the cairn.

Burial 4: 0.4 m W of burial 3, 0.5x0.3 m, 0.3m deep, constructed from slabs. Covering slab measured 0.8 x 0.6 m. Underneath the bottom slab the area was filled in with smaller stones, set about 0.5 m above the bottom of the cairn. Inside there was a clay urn containing cremated bones (B11182).

Burial 5: about 2 m SSW of 2, close to the wall there was a small cist, about 0.25 x 0.3 m

wide and deep, slabs set on top of stones, smaller stones were filled in-between around the slabs to keep them in place. No finds.

Literature Bakka 1958, 1972; Fett 1967

RA ID no 35508
FK no 3
Farm Hystad
Municipality Stord
Width 14m
Height 2m
Date LBA
M.a.s.l. 5-6 m

Location

On outcrop on the eastern side of Valevågen bay, the ground slopes down to the sea.

Finds

B11184: bronze razor, cremated bones, bark and wood.

B11185: late Iron Age burial; sword, spearhead

Construction

The cairn was partially excavated in 1958. There is an inner wall, constructed from flat stones and small slabs, with a diameter of 7 m. It has a façade, and is about 0.5 m high. A small cist was found next to the wall to the W, it measured 0.6x0.4 m, 0.25 m deep, made from slabs. The bottom slab was partially covered by a layer of fine sand and a bronze razor was found stuck into the sand. Fragments of wood were found in the cist, bark was found between the covering slab and standing slabs. The covering slab measured 0.62x0.45-0.50 m. Burial 2: outside the wall (Viking Age) burial was found: a sword grip and pieces of iron objects.

Literature Bakka 1959, 1972; Fett 1967

RA ID no 55292-2
FK no 4/3
Farm Hystad
Municipality Stord
Width 13 m
Height 1.5 m
Date BA
M.a.s.l. 10-20 m

Location

On a hill near Russeklubben, between Apaldevikjo and Mjelkevikjo bays. Here there is a flat area where four cairns and a stone ring are located. The ground slopes down in all directions. The cairn is located 11 m NE of 55292-1.

Finds

B11181: shards of bucket-shaped pot, Iron Age and a bone.

Construction

The cairn was partially excavated in 1959. In the centre of the cairn, a drywalled cist was found, about the length of a person, flat stones had been used. Unfortunately, the cist was destroyed by vandals shortly after. Parts of two concentric walls were uncovered. The inner wall appeared to enclose the cist, it was made from flat stones and slabs, and 0.5 m at the highest point. A second wall was found outside this, larger stones and small boulders were used to build this wall, it was located 2-3 m from the edge of the cairn. Both walls had façades. Outside the outer wall shards of an Iron Age pot and a bone were found in amongst the stones.

Literature Bakka 1959, 1972; Fett 1967

RA ID no 60602
FK no 1/1
Farm Nordhuglo
Municipality Stord
Width 18-19 m
Height 2 m
Date EBA
M.a.s.l. 10 m

Location

Huglo island. SW at Hommandeneset promontory, on an outcrop about 125 m NNW from the tip of the promontory and 15 m from the sea. The cairn is located on the edge of a steep slope leading down to the sea. Good view of the shipping lane, Stord and

Finds

B4299: bronze dagger, period 2-3. A jaw bone was found but was thrown away.

Construction

In 1885 a cist was found while stone was being removed from the western part of the cairn. The cairn was built around an outcrop and there was about 1 m of stones on top of the outcrop. Inside the cist, a bronze dagger (B4299) was found. The cist was built in a depression in the rock about 4 m from the western edge, and the bottom was covered by beach pebbles and gravel. A jaw bone with teeth was also found, and the dagger was found on the left side of the "body". The cist was 2x0.4 m and 0.45 m deep, and was drywalled. It was covered by two slabs, the largest was 1.6x0.75 m, the smallest was concave and looked like a quern stone. Unfortunately, the cist was destroyed by vandals in 1959. According to relatively recent surveys, there is a wall leading from the western edge towards the centre, about 3 m long and 0.75 m wide. Earlier reports do not mention a wall, however the cairn has not been professionally excavated and has also been damaged. The covering slabs are next to the wall. The stone described as a quern stone is 1.5 m wide and up to 0.5 m thick. Today there is some vegetation on and around the cairn.

Literature Bakka 1960, 1972; Fett 1967

RA ID no 16130
FK no 1/1
Farm Rimbareid
Municipality Fitjar
Width 25 m
Height 2-4 m
Date EBA
M.a.s.l. 90 m

Location

On top of a hill, with a good view of the surrounding area.

Finds

B01825 sword, and a dagger that is now lost.

Construction

There are several craters in the cairn. It was opened by a tavern owner sometime between 1785 and 1795. A chamber was found near the bottom of the cairn, it was drywalled and was covered by a slab. The covering slab measured 1.9 x 0.6 metres. Inside, there was charcoal/ash, and a sword and a dagger was found. The sword is likely to be B 1825, no information as to what happened to the dagger.

Literature Fett 1973; Østerdal 1999

RA ID no 25833
FK no 1/1
Farm Skålavik
Municipality Fitjar
Width 14 x 11 m
Height 0.5-1.5 m
Date LBA
M.a.s.l. 5-6 m

Location

On a promontory at Skålavik, on an outcrop in a garden. The ground slopes down to the sea from the cairn.

Finds

B06638: Pottery shards from two urns.

Construction

The cairn is damaged, part of it was destroyed when a house was built next to it. It was later excavated by De Lange in 1912. In the centre he found the remains of a cist, which contained shards of a pot, a low open bowl. Shards of a second pot were found spread in the cairn; this pot was of the same type but was somewhat smaller (B06638).

Literature De Lange 1913; Fett 1973; Østerdal 1999

RA ID no -
FK no 2/1
Farm Støle
Municipality Etne
Width 10-12 m
Height 1.5 m
Date Period 4-6
M.a.s.l. 75 m

Location

Olahaugen. On the edge of a terrace, near the church, along with several other barrows.

Finds

B6592, ceramic vessel, cremated bones and pottery shards

Construction

The Olahaugen barrow was used as a gravel pit and only a quarter was left when Shetelig excavated it in 1912. A cist containing an urn with cremated bones (B06592) had been found here. The cist was square and measured about 0.4 metres and it was set on the bottom of the mound. The bones had been cleaned before deposition in the urn. A shard from a second urn was found in-between the slabs, and charcoal was found on and underneath the bottom slab, as well as outside the cist. Several cists had previously been discovered when gravel was removed, and Shetelig was given some shards.

Literature Shetelig 1912, 1913; De Lange 1913; Fett 1968;
Nordenborg Myhre 1998.

RA ID no	55173
FK no	5/1
Farm	Sydnes
Municipality	Kvinnherad
Width	12-13 m
Height	2 m
Date	LBA
M.a.s.l.	15-20 m

Location

At Skarvaberget hill, close to the edge of a drop down to the sea, N of the northern promontory at Narrevikjo bay. View of the fjord.

Finds

B13626/1: 30 shards of a ceramic vessel, the shards from the body are decorated, there was a belt of line decoration between the rim and the shoulder, alternating between vertical and horizontal lines. The decorated belt stops at the shoulder, with a 0.5 cm field of vertical lines.

B13626/2: double twined cord, length 10 cm, possibly some plant fibre.

B14262/1: 13 shards of a ceramic vessel, tempered with quartz, reddish-brown B14262/2: 15 small shards of a ceramic vessel, decorated with lines.

B14262/3: six small pieces of shells, mother-of-pearl-like. B14262/4: six fragments of cremated bones. All shards are from the same pot, which had a handle, a rim round the neck and a rounded bottom, possibly with a small level area so that it could stand. Some bones were radiocarbon dated, unfortunately, there was not enough material for a date.

Construction

The cairn was partially excavated in 1986, after a small cist containing pottery shards, cremated bones and cord of plant fibre was examined by Bjørn Myhre in 1983. The pottery was of type dated to the LBA, and the cist was interpreted as a secondary burial. It was located in the northern section of the cairn, and consisted of slabs. I have not found references to its size. The purpose of the 1986 excavation was to look for more pottery shards and bones, before a restoration of the cist and cairn.

Literature Fett 1956b; Auestad 1986

RA ID no -
FK no 5/18
Farm Sørheim
Municipality Etne
Width 15-20 m
Height 2 m
Date EBA
M.a.s.l. 75 m

Location

Lundahaugen was located 50 metres from Garahaugen.

Finds

None

Construction

Originally it had a diameter of 15-20 metres and was surrounded by a ditch but at the time of excavation it was severely disturbed and ploughed out. The monument consisted of a central cairn surrounded by several rings of stones and covered by a mound. The remains of a chamber built from slabs were found in the centre of the cairn; it had been destroyed by grave robbers, but must have been about 2 metres long and 0.7 metres wide and should thus indirectly be dated to the Early Bronze Age. Underneath the mound a layer of soil containing charcoal was uncovered, and a radiocarbon sample gave 2940±130 BP (T 1278). Several cooking pits were found underneath this layer, a sample from one pit gave 3750±90 BP (T 1280).

Literature Fett 1963; Indrelid 1969; Myhre 1977

RA ID no -
FK no 5/10
Farm Sørheim
Municipality Etne
Width 20 m
Height 2 m
Date Period 2-3
M.a.s.l. 75 m

Location

Garahaugen was located on a terrace at Sørheim, where several barrows are known.

Finds

Bronze dagger, B12690

Construction

The monument consisted of an inner cairn covered by a mound of sand and soil. The cairn was built on top of an earthen platform. Near the edge of the mound there was a kerb consisting of two rows of stone encircling the cairn, and there were no stones between the cairn and the kerb (Magnus and Myhre 1970:3). The excavators concluded that the monument originally was a mound surrounded by the kerb, and that it was enlarged at some later point, covering the kerb. A chamber made from slabs and measuring 0.75 x 0.35 metres was found in the central cairn, containing a mixture of soil, sand and clay, cleaned cremated bones and charcoal; it had also been disturbed by treasure hunters. The charcoal was dated to 3330±80BP/1460-1300 cal BC (T 858), placing the chamber in period 2. A second grave consisted of cremated bones and charcoal between some stone slabs in the mound, interpreted by the excavators as a burial (Magnus and Myhre 1970; Vevatne 1996:31) and dated to 3030±70 BP/1150-1010 cal BC (T 959). A possible burial from the Pre-Roman Iron Age (B12050a) was found near the edge of the mound, consisting of pottery shards. According to a survey conducted by Egil Bakka in 1956, the northern edge of the mound had been disturbed and a small empty cist made from slabs was found (Bakka 1956). A cooking pit and several ard furrows were found underneath the platform, charcoal from an area near the pit was dated to 3080±20/1210-1050 cal BC (T 860). The dagger was found in a chamber that contained ash, and it is highly probable that it was found in Garahaugen.

Literature Bakka 1956; Fett 1968; Magnus and Myhre 1970; Myhre 1972; Vevatne 1996

RA ID no 106079
FK no 3
Farm Tjernagel søre
Municipality Sveio
Width 20 m
Height 2.5 m
Date BA-IA
M.a.s.l. 26 m

Location

Located on an outcrop about 50 m from the sea, with a good view of the fjord.

Finds

Pottery shards, bark, shells (*Littorina Littorea*), flint, charcoal, mussels, cremated human bones, bones from sheep/goat

Construction

The cairn was excavated in 1983 and several finds were made: Two cists and an inner wall. Radiocarbon dates indicate an IA date, with one LN date. However, it is likely that the centre of the cairn is originally BA. The excavation revealed an inner cairn consisting of stone and soil, measuring 10 m across and 0.75 in height. Three layers were identified: layer 1 was a dark, black layer with some particles of charcoal, probably the original ground. Layer 2 was a brown layer of soil mixed with gravel. Layer 3 was a layer of dry black soil. The stones were mostly set on top and into layer 2 and 3.

Cist 1 was constructed on the rock, and the top of layer 3 was level with the top of the cist. It measured 1.75 x 0.2-0.3m and was 0.35-0.5 m deep, consisting of two slabs on either side and one slab at either gable. It was covered by slabs in several layers. Inside, the three layers were present. A charcoal sample from layer 3 was dated to 3790+-120BP (T 5503). A sample taken from underneath a stone that supported the wall of the cist gave 1900+-100 BP (T 5504). The excavator interprets the cist to have been contemporary with the inner cairn. The soil layers inside the cist contained some flint, mussels, a crab claw, a fragment of coarse pottery. A *Littorina* shell was found between two layers of covering slabs.

Cist 2 was located in the centre of the cairn, on top of the inner cairn. It was dry walled from flat stones, and measured 1 m x 0.3-0.45 m and 0.40-0.45 m deep. The covering slab was 1-1.10x0.40-0.70 m. The bottom consisted of the top of layer 3 and the cist had not been filled in. Stones were packed tightly around the cist and the excavator concludes that the second phase of building the cairn started at this point, filling in stones and covering the inner cairn. Two burnt human bones were found next to or under the centre of the northern side wall. Several of the stones surrounding the cist were covered in bark. 0.5 m underneath the cist, a possible burial was encountered, a concentration of cremated bones, charcoal and a flint knoll. 200 fragments were found, 6 were sheep/goat, the rest were human. A radiocarbon sample gave 2900+-70 BP (T 5502). This puts the concentration in the EBA, this is also the best sample as it was taken from a clear concentration. However, the wood could have been relatively old when it was used, so a likely date for the concentration is EBA-LBA. In the N part of the cairn which faced the sea, a wall was uncovered, 1-3 m from the outer edge of the

cairn, so as to enclose the inner cairn, and 13 m long. It was fragmentary and was built from flat stones set on top of large round stones. Maximum height was 0.75 m. Stones were filled both on the inside and outside of the wall, and the excavator's interpretation is that the wall was built at the same time as cist 2, as this part of the cairn only consists of stone. In addition stone filled ledges below the cairn were examined, and found to be intentional, so as to make the cairn more monumental. The outline of the cairn seems to have followed the shape of the rock.

Literature Fett 1973; Ringstad 1983, 1985

RA ID no 35538
FK no 1
Farm Uggdal
Municipality Tysnes
Width 6 m
Height 0,5
Date LBA
M.a.s.l. c.100 m

Location

In Uggdalsdalen in Tysnes, in a location known as Uggdalsvollen. According to Per Fett, there were about 20 mounds and cairns here.

Finds

Pottery shards and charcoal

Construction

The cairn was damaged due to agricultural activity. It was excavated in 2004, and according to the report it was severely damaged. A small chamber was found, set into a natural depression in the rock, and cremated bones and pottery shards were found. The bones were radiocarbon dated to cal BC 930-840 (Handeland 2005:3).

Literature Fett 1954a; Handeland 2005

RA ID no 112279-1
FK no 1/1
Farm Utne
Municipality Ullensvang
Width 15 m
Height 1.5-1.9 m
Date EBA
M.a.s.l. 15 m

Location

On top of a slope at Tingnes, N of Ytste Fossedalselva river, 40 m from the beach. Several other cairns and mounds were located in this area, most have been removed.

Finds

B8088, bronze dagger. Found after the cairn had been removed in the area where the cist had been.

Construction

Round cairn that had a stone ring. The height in the centre was that of a man, i.e. up to 2 meters. The cist was made of slabs, one of the slabs forming the longest side measured about 2.2 m. The cist was about 2 m long and was oriented NE-SW, it was built directly on the beach as evidenced by round beach pebbles that were visible under the entire remains of the cairn.

Literature Bakka 1963; Bøe 1930, Fett 1954

RA ID no -
FK no 5/2
Farm Vespestad
Municipality Fitjar
Width 25 m
Height 2-3 m
Date LBA
M.a.s.l. 15-20 m

Location

At Kalveidet, an old isthmus, this is now land. There were several cairns here, spread in a slightly curved line. There are also several concentrations of cairns at Vespestad. Some were excavated by De Lange in 1905. In some he found small chambers and charcoal, so there are probably more cairns from the Bronze Age and Early Iron Age here.

Finds

B05962/a-d: Pin, button, knife/razor and tweezers

Construction

Excavated by De Lange in 1905. He found two cists in the cairn: The first cist was located five metres from the western edge, built on the bottom of the cairn and consisted of slabs. It measured 1 x 0.6 metres, and on the bottom slab ash, large pieces of cremated bones, and three bronze objects (B05962) were found: a pin, a button, a knife and outside the chamber, close to the bottom slab, one half of a pair of tweezers. Another 2.5 metres further in, De Lange found a cist about 2 metres long and built of stones with flat sides that faced inwards, and the bottom was covered with small beach pebbles. This is presumably an EBA primary grave.

Literature De Lange 1905, 1913; Fett 1973; Østerdal 1999

Appendix C: Finds from the Bronze Age

Finds that are dated to the Bronze Age in the study area are presented here. First, all objects are listed; subsequently, metal objects, stone axes, and flint daggers have been listed separately.

Objects found in excavations are described briefly, as that information is available in reports, as well as described in chapter four and six.

Finds from the Bronze Age

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B00074	Shaft-hole axe	Stone	LBA	Opedal	Ullensvang	Marstrander's type E, Rygh's R39, Baudous type XV, C5. Grey with lighter specks. The shaft hole is unfinished. The sides of the axe leading to the edge are faceted.	According to Fett (1954), the axe is said to have come from a large mound, along with a knife blade. The original catalogue entry says nothing about the context.
B01006	Socketed axe	Bronze	Period 3	Seim	Odde	Axe similar to Montelius: Minnen 993. There is some damage around the socket and the axe is almost flattened here, other damage includes scratches on the blade. There are two ridges around the socket. There is no sign of a loop. Two raised ribs run from the edge to the rib around the socket, and between the ribs there is a Y-shaped rib running two thirds towards the edge. Similar axes are dated to period 3 in Scandinavia.	Said to have been found in a barrow before 1841, but this is uncertain. According to Fett (1954), it might also have been found in the ground.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B01008	Sword	Bronze	Period 6	Lekve	Ulvik	Hallstatt-type sword, complete and undamaged. The handle has a rivet-hole and a small tang at the top. The shoulders are wide and have rivets, below the shoulders there is a marked indentation along both edges of the blade. Two parallel groups of three lines run from the top of the shoulders along the midrib almost to the tip. Broholm fig 24, Montelius: Mimmen fig 1198-1199, Rygh R102.	Found in a crack in the stone in the mountains, near a summer farm, 450 m.a.s.l.
B01825	Sword	Bronze	Period 3	Rimbareid	Fijjar	Sword with organic hilt and pommel, Montelius: Mimmen fig.1002, 1011, also Rygh R 101c. The pommel might have been inset with organic material.	Found in cairn at Rimbareid, near Fijjar church, most likely the Rimsvarden cairn. The owner of a tavern dug into the cairn and found a chamber in which there was a sword and a dagger, as well as charcoal. The sword was used to cure sickness and ease childbirth. In 1866, B1825 was handed in to the museum and noted as having come from a farm at Stord. According to Per Fett (1973), the tavern owner's daughter was married to a man from this farm, and she was a midwife. Thus it is very likely that B1825 did indeed come from Rimsvarden.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B02464	Sickle	Flint	LN/EBA	Hauge	Granvin	Crescent-shaped, with serrated edge.	Found during farmwork, two pieces of flint also found, B02465.
B02879	Grooved axe	Stone	LBA	Langeseter	Ullensvang	Solberg type C2:1 (Solberg 1988). Polished towards the edge, which is blunt.	No information
B03389	Shaft-hole axe	Bronze	Period 1B	Kvale (Årekol)	Ullensvang	Axe of Färdrup-type (e.g. Vandkilde 1996:227); massive four-sided bronze axe with no decoration. The shaft-hole is large and covers almost the entire width. Dark green, most of the patina is worn off. There is some damage, notches and depressions, on the sides and on the edge, which is strongly curved. The butt is convex. Montelius: Minnen 813-814.	Found near an outcrop, "Brynefjellet".
B04299	Dagger	Bronze	Period 2-3	Nordhuglo	Stord	Full-hilted dagger, cast in one piece. Dark green, strongly corroded. The transition to the hilt is marked by a crescent-shaped ridge. Possible midrib along the blade. The pommel is square with rounded corners and there is a small round protrusion in the centre.	Found in burial chamber in cairn in 1882.

B-number	Artifact	Material	Date	Farm	Municipality	Description	Context
B04541	Shaft-hole axe	Stone	LBA	Ystás	Granvin	Egg-shaped polished axe, dark grey quartzite. Manstrander's type E (1983), Baudou's type XV D (1960). Round neck and blunt edge.	Found at Gilsbrekkene, near a gully and near cracks or the entrance to small caves (Fert 1954), but the exact location is no longer known.
B04730	Shaft-hole axe	Stone	LBA	Ljones	Kvam	Dark porphyrite with lighter specks. Manstrander's type D, Baudou's type XV B1d. Rectangular cross-section, slightly rounded neck, the sides are polished facets so as to create "shoulders" on either side of the shaft hole. Blunt edge.	Found in the sea in mint condition, off Vikingsnes promontory.
B04918	Grooved axe	Stone	LBA	Unknown	Odda	Manstrander's type F, Rygh R. 16, Solberg's type D2 (1988). Sandstone. Damage to one side. Blunt edge.	No information

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B04954	Sword blade	Bronze	Period 2	Sorvoll	Bømlo	Blade of a sword similar to Montelius: Minnen fig. 901 and 903. The blade is cut or broken at the hafting plate, part of a rivet-hole is visible. The blade is golden and brown. Some notches along one side, possibly during casting. The mid-section of the blade is wider and the sides taper and converge into the point. The midrib is flanked by a group of three lines on either side, converging at the point.	Found in a ditch in a peat bog, c. 1893.
B05599	Dagger	Flint	EBA	Gjerde	Etne	Type VI b. Small dagger, grey-brown flint.	Found in a field at Gjerde, south of the church.
B05872	Shafthole axe	Stone	LBA	Eide	Granvin	Fragment of miniature axe of Marstrand's type B or D, Rygh's R37, Baudou's type XV B 1.d. Reddish-brown, porous stone. One half of the shaft hole is preserved, it measures 1 cm. Three sides are polished, with a thin incised line along the faceted side.	No information

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B05929	Socketed axe	Bronze	Period 5-6	Unknown	Unknown	Axe of the Norwegian Mälartype. Baudou's type VII B 1b, Rygn R 98. Three parallel transverse ridges on the socket, set parallel to the loop. A set of three ridges run from the rim of the socket to the edge. The centre ridge stops two thirds along the blade, while the outer ridges mark the sides of the axe.	No information. Kept at Rosendal Barony, probably found at or near barony.
B05932/a	Bronze fragments	Bronze	Period 4-6	Eide	Jondal	The excavator, Haakon Schetelig, believed that the object could have been a knife, but he did not give any further description (Schetelig 1910). Not found in museum stores.	Found in cairn (Fetts no 3/2) along with two urns and cremated bones (B05932/b-d).
B05932/b	Ceramic pot	Clay	Period 5-6	Eide	Kvam	Parallel: Baudou's type XXVIII C1 (plate XX). The pot is conical with a rounded mid-section which is decorated with a line pattern, and the neck is cylindrical. There is no rim, and the pot had a handle which must have been broken before deposition as there was no corresponding shard.	Found in small chamber in cairn (Fett no 3/2), along with a second urn, cremated bones and fragments of a bronze object.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B05932/c	Pottery shards	Clay	Period 5-6	Eide	Kvam	Shards from an urn, almost disintegrated and impossible to restore. Similar to Rygh figure 141, Baudou type XXV III B 2 (pl XIX). Flat bottom, conical body, marked shoulders and a narrowing neck.	Found in small chamber in cairn (Fett no 3/2), along with a second urn, cremated bones and fragments of a bronze object.
B05932/d	Bones	Bone	Period 4-6	Eide	Kvam	Cremated bones from the urns B05932/b-c.	Found in two urns in a small chamber in cairn (Fett no 3/2), together with fragments of a bronze object.
B05940	Spearhead	Bronze	Period 6	Tjeldflott	Etne	Complete spearhead, with midrib. The blade is evenly curved, with an ornamental line running parallel to the sides. About 2 cm from the rim of the socket there are two rivet-holes, both decorated with a ring of radial lines. A midrib runs from the blade along the socket to the rivet-holes, small slanted lines are punched into the rib.	Found in gravel on a slope, many stones and outcrops. Possible votive deposit
B05962/a	Pin	Bronze	Period 4-5	Vestbøstad	Fijjar	Pin with round plate, Raudou's type XXV B 2b, Montelius: Mifinen 1326. The plate is decorated with three concentric rings encircling a round protrusion.	Found in burial chamber in cairn

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B05962/b	Button	Bronze	Period 4-5	Vestbøstad	Fijjar	Small button, consisting of a small flat plate connected by a rod to a larger top plate. The top plate is rounded and small dots are punched in around the edge of the plate. Two circles have been punched in on one side, the button is rather worn and there were probably more circles originally. Baudou's type XXVI A 2a.	Found in burial chamber in caim
B05962/c	Tweezers	Bronze	Period 4-6	Vestbøstad	Fijjar	One half of a pair of tweezers, broken at the top. Dark green patina. Three parallel lines run from the top to the edge, which curves slightly inwards. The edge is wider than the top. The decoration is similar to Montelius: Minnen 1365.	Found in burial chamber in caim
B05962/d	Knife/razor	Bronze	Period 4-5	Vestbøstad	Fijjar	Knife or razor. Dark green patina, triangular shape ending in a short tang. The point is missing. Similar to Baudou's type XI B 4b	Found in burial chamber in caim

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B06088	Shaft-hole axe	Stone	LBA	Tveit	Jordal	One half of a polished egg-shaped axe. Marstrander's type E, Baudou's type XV D, gabbroporfyrte. Dark grey with lighter specks.	Found near the river.
B06203	Shaft-hole axe	Stone	LBA	Kråkevik	Ullensvang	Egg-shaped axe. Marstrander's type E, Baudou's type XV D, gabbroporfyrte. Dark grey with lighter specks. There is no shaft hole and the axe is not polished. Facets on either side of the edge, but they are not clearly marked. The edge is blunt.	Found under a large boulder which forms a small rock shelter
B06264	Dagger	Flint	EBA	Tufto	Odda	Type VI a, Rygh 64. Grey flint. Part of the hilt is missing.	No information

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B06273	Ceramic vessels	Clay	Period 4-6	Breivikjø	Fijjar	Shards of three of four pots. Egil Bakka reconstructed one pot from the shards (1955:67), a low bowl with some decoration consisting of a triangular line pattern and indicating a Late Bronze Age date (Bakka 1955; Østerdal 1999), possibly something like Baudou (1960) type XXVIII B 1 (pl XX). The shards have not been found in the museum stores.	Cairn at Rosnes, excavated by De Lange. He found a small cist measuring 0.75 x 0.45 metres, made from slabs. Inside, there were shards of four pots: shards of two pots and cremated bones were next to the southern gable, a pot was placed next to the eastern side, and a pot containing cremated bones was placed in the centre of the cist (De Lange 1913). The cist was also half-filled with soil.
B06508	Dagger	Flint	EBA	Frije	Etne	Type Via, Rygh fig. 64. Grey-yellow opaque flint, part of the blade is missing.	Found about 100 metres from the farm houses when clearing a field.
B06592	Ceramic vessel	Clay	Period 4-6	Stole	Etne	Small conical pot, the rim is wider than the bottom. Made from coarse clay tempered with gravel. A shard of the same ware was found in-between the slabs in the chamber. The shards from the third pot were found in another chamber. Coarse clay, one of the shards has the beginnings of an almost nose-like protrusion.	Found in a small chamber in a disturbed barrow, Olahaugen One complete pot and shards from two other pots, one of which came from another chamber.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B06638/a	Pottery shards	Clay	Period 4-6	Skålevik	Fijjar	Three shards from a bowl similar to Madsen 1872, plate 43, figure 26. Coarse clay, reddish colour. General date to the Late Bronze Age (De Lange 1913:51)	Found in a cist excavated by De Lange.
B06638/b	Pottery shards	Clay	Period 4-6	Skålevik	Fijjar	Two small shards from a smaller, but similar pot as B06638/a, made from the same coarse clay, same reddish Age (De Lange 1913:51)	The shards were found spread in a cairn excavated by De Lange, at some B06638/a was found.
B06757	Pottery shards	Clay	Period 5-6	Gjerstad	Tysnes	Shards from a small pot. Parallel in Müller 1891, figure 246. Tempered with gravel. Reddish colour, but gray-black core, thick walls. Almost identical to the urns found at Hystad, thus dating the pot to period 5-6	Found in a small chamber in a cairn at Gjerstad.
B06759	Spearhead	Bronze	Period 3	Nesbø	Fijjar	Spearhead similar to Rygh fig. 111, with midrib. The blade starts almost at the socket, widening and then converging toward the tip.	Found in a heap of earth in a peat bog. There are two peat bogs, one near the farm houses and one higher up in the mountains according to Per Fett (1973).

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B06790	Shafthole axe	Stone	LBA	Raudstein	Kvinnherad	Rhombic axe like Marstrander's type D (1983), Baudou's type XV B 1 (1960), Rygh R37, red sandstone. Faceted sides, the shafthole is barely started.	Found white building the barn.
B06877/a	Neckring	Bronze	Period 6	Vikedal	Kvam	Part of a twisted neckring, Baudou's type XV D 1.	Found in gravel under a rock, about 7 m.a.s.l. and 50 metres from the sea.
B06877/b	Neckring	Bronze	Period 6	Vikedal	Kvam	Twisted neckring, Baudou's type XV D 1	Found in gravel under a rock, about 7 m.a.s.l. and 50 metres from the sea.
B06877/c	Neck ring	Bronze	Period 6	Vikedal	Kvam	Twisted neckring, Baudou's type XV D 1	Found in gravel under a rock, about 7 m.a.s.l. and 50 metres from the sea.
B06877/d	Pin	Bronze	Period 6	Vikedal	Kvam	Pin, Baudou's type XXV B2d. A Norwegian type, the needle plate consists of five round plates connected by short rods, one plate in the centre and the other four grouped in two on either side. Each plate has a round protusion in its centre, surrounded by a circle.	Found in gravel under a rock, about 7 m.a.s.l. and 50 metres from the sea.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B06877/e	Pin	Bronze	Period 6	Vikedal	Kvam	Pin, Baudou's type XXV B2d, A Norwegian type, the needle plate consists of five round plates connected by short rods, one plate in the centre and the other four grouped in two on either side. One of the plates is broken off. Each plate has a round protusion in its centre, surrounded by a circle.	Found in gravel under a rock, about 7 m.a.s.l. and 50 metres from the sea.
B07182	Dagger	Flint	EBA	Myklebost	Kvinnherad	Type VI a. Grey flint. The hilt measures 7 cm and the end has been used as a strike-a-light. The blade has been extensively resharpened.	Found when harvesting potatoes in slightly sloping terrain, 2.5 m.a.s.l. and 200 metres from the sea.
B07355	Shafthole axe	Stone	LBA	Norheim	Kvam	Edge of a porphyritic axe, broken across the shafthole. Some damage to the edge, possibly from use. Rygh R37.	Found in a field

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B07364	Shafthole axe	Bronze	Period 2	Rimbareid	Fijjar	<p>Massive decorated flanged shafthole axe. Dark brown patina, much of which was dissolved when the axe was found and the finder tried to polish it. The axe has a short shaft tube, the butt is round and has a flat collar. The body of the axe is slim and the edge ends in a curved blade. Type C (Aakvik 2000:21-23; Johansen 1984:136-7). Parallels: Montelius: Mimmen fig. 866, 870, 873. Three identical axes have been found in Scandinavia, one in Denmark and two in Sweden (Aakvik 2000:23). There is decoration on the butt, on the sides from the butt to the edge, around the edge, and around the shaft tube. Marked flanges from the shaft tube to the edge. There are three lines and a faint line of small circles along the edge, above which there is a border of ten connected spirals, and a group of five lines above the spirals. A line runs along the sides from the edge to the shafthole, plus a faint border of triangles. The shaft tube is decorated with lines and ogival lines, parallel lines and beads under the tubes. Parallel lines, beads, spirals between the tube and butt. The collar has a wave pattern underneath and a pattern of lines and beads on top. The butt ends in a circle with a small protrusion inside, remains of a line pattern.</p>	<p>Found in or near water spring, in clay under about 1 metre of soil in a boggy area. The clay was blue from verdigris.</p>

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B07595	Shaft-hole axe	Stone	LBA	Nesheim	Granvin	Unfinished axe of Ryghs type R39, Marstrand's type E (1983), Baudou's type XV C5 (1960), dark grey with white specks, saussuritegabbro. There is no shaft hole. There are triangular facets or reliefs to either side of the edge, which is blunt.	Found in the mountains, near the railway, about 10 metres from the water, in clay under a large boulder in a scree. The exact location is no longer known.
B07644	Dagger	Flint	EBA	Tokheim	Odda	Type VI a, Rygh fig. 64. The blade has been extensively resharpened	Found in red gravel, 30–40 masl.
B07656/a	Ceramic vessel	Clay	Period 5	Grindheim	Etne	Small pot with handle, similar to Baudou XXVIII B3, plate XX. Conical, convex neck. Some damage to the rim.	Found in a cist in a barrow at Grindheim, "Kyrkjehaugen". The pot contained a bronze razor, B07656/b, and cremated bones.
B07656/b	Razor	Bronze	Period 4	Grindheim	Etne	Razor, Rygh's figure 115, Baudou's type XI B 1c, plate VII, the razor had a spiral-shaped handle. The spiral is now missing. There are some notches on the edge, these are recent damage. The blade widens towards the handle. Fragment of a ridge along the sides from the handle.	Burial, found in stone cist in ploughed-out barrow. The cist was filled with charcoal and soil. The razor was placed inside a pot. Other finds: pot, cremated bones and charcoal.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B07759	Dagger	Flint	EBA	Nervik	Etne	Type VI b, blade, similar to Gjessing-Rogalands steinalder fig. 206. The tip and part of the hilt are missing	Found in a field close to the sea, in a place called Varhaug
B08088	Dagger	Bronze	Period 2	Utne	Ullensvang	Blade of a dagger, corroded. The remains of a rivet hole can be seen on one side of the hafting plate. These daggers usually have a midrib, often decorated with lines on either side of the rib, converging towards the point. The hilt is usually organic. Description is based on photographs as the dagger was not found in the museum stores.	Burial. Found in stone cist in large cairn, 1930. Report Jobs Bøe 6/9/1930. Nesjarøysi, Neset. A number of cairns were located on the promontory, removed before 1880.
B08093	Dagger	Flint	EBA	Viveld	Eidfjord	Type VI, cf. Gjessing-Rogalands steinalder fig. 206. Grey flint, small.	No information
B08342	Dagger	Flint	EBA	Utne	Ullensvang	Type VI b. Cf. Montelius: Minnen fig. 486. The dagger is complete, but has been sharpened.	Found in an old field in a layer of gravel, about 80 cm deep and 7-8 metres from the site of the Nesjarøysi cairn.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B08382	Dagger	Flint	EBA	Nedre Sekse	Ullensvang	Type VI a, Miniature dagger. It has been reshaped. Rhombic cross-section. Brown-grey flint. Similar to Rygh fig. 73.	No information
B08694	Shafthole axe	Stone	LBA	Kaldheim	Etne	Fragment of egg-shaped axe, Marstrander's type E, Baudou's type VX D, broken in the shafthole. Parallel: Brøgger 1907:80, fig.51.	No information
B08903	Mould	Soapstone	LBA	Opedal	Ullensvang	One half of mould for socketed axe. The axe is slim and has no decoration, thus only a general date to the Late Bronze Age.	Found about 50 cm deep in slope, about 20-30 metres from the site of several pits and a ditch (F-ett 1954; Bakka 1963)
B08979	Shafthole axe	Stone	LBA	Gjerstad	Tysnes	Rhombic stone axe, Rygh's type R37. A parallel is Montelius, Minnen, fig. 330, but the axe from Gjerstad has a shorter butt. The shafthole is unfinished. Defined shoulders and polished sides, square cross-section.	Found in a field

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B09097	Neck ring	Bronze	Period 6	Støle	Etne	Twisted neck ring with two oval plates in front, each ending in a spiral. The spirals are interlinked and form the opening mechanism of the ring. The ring is golden, as the patina was removed by the finder. The left spiral is cast as part of the plate, while the right spiral was cast separately and fixed to the right plate with two nails. The plates are slightly curved and their largest width is 4,8 cm. No decoration. No other damage. Type: Montelius: Minnen fig.1293.	Found during digging along the foot of an outcrop. The ring was placed on a large stone in a layer of soil, there was a layer of peat on top of the soil.
B09124	Mould	Soapstone	Period 6	Eide	Granvin	One half of mould for socketed axe. The axe is similar to Montelius: Minnen fig. 1170, but the mould has three transverse ribs between the loop and the rim. Some damage to the edge and a V-shaped notch at the top.	Found in reddish soil during potato harvest.
B09289a	Dagger	Flint	EBA	Nes	Kvinnherad	Type VI, like Gjessing: Rogalands stenaldler fig. 197. Brown flint	Found along with a fragment of a dagger in a field

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B0917	Grooved axe	Stone	LBA	Sandsto	Ullensvang	Polished grooved axe, Solberg's type D2, Marstrand type F. The axe tapers down from the top to the neck, from the shaft-hole.	Found while building a house, 20-25 msl, about 100 meters from the shore and near a brook, 20 cm deep in gravel.
B10073/a	Spoon shaped scraper	Flint	LN/BA	Flatabø	Jondal	Small spoon-shaped scraper in grey flint. Cortex on the dorsal side, broken at shaft-end.	Found in a field (Storåkeren), c. 1910.
B10075	Dagger	Flint	EBA	Ølfernes	Kvinherad	Type VI. Guessing: Rogalands stenalder fig. 201. Most of the blade is missing. Grey-white flint.	Found when clearing a field, 85 metres from the sea.
B10086	Shaft-hole axe	Stone	BA	Halleland	Etne	Miniature rhombic axe, like Rygh's type R37, with marked shoulders and polished sides. Soapstone. No decoration. Nissen Fett 1968, fig 16.	Found on a slope, plough depth.
B10227	Dagger	Flint	EBA	Ljosnes	Kvinherad	Type VI. Guessing: Rogalands stenalder fig. 199. Part of the blade is missing. Grey-white flint.	Found when digging ditches, 1 metre deep, about 10 msl and 40 metres from the sea.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B10267	Socketed axe	Bronze	Period 5	Kvamsoy	Kvam	Small socketed axe. The loop is worn and there is some damage to the socket.	No information.
B10300/a	Shafthole axe	Bronze	Period 2	Lunde	Ølen	Decorated shafthole axe, type C (Aakvik 2000:21-23; Johansen 1984:136-7), parallel: Montelius: Minnen fig. 870. Dark brown patina, partially dissolved. The shaft tube sockets and a small part of the edge are missing, the butt is conical. The axe is hollow, but still weighs 0.939 kilos. The blade is decorated with three spiral borders. The shaftholes are surrounded by a pattern of lines and zigzags, there is a pattern of spirals on either side of the shaft tube, similar to Montelius: Minnen fig 866, 874. Between the shaft tube and the butt there are lines, zigzags and spirals, and the butt is decorated with the same line and zigzag pattern as well as oblique strokes. Three parallel line run along the sides.	Found in a water spring, Slettakjeldo, about 60 masl, near a scree. The axe was found together with a second axe, B10300b, and later a third axe. B10999 was found close by. The axes were found when the spring was widened and shored up, the gravel that was dug out contained the axes.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B10300/b	Shaft hole axe	Bronze	Period 2	Lunde	Ølen	Decorated, massive, ribbed shafthole axe, type C (Aakvik 2000:2.1-23; Johansen 1984:136-7), parallel; Montelius: Mjimmen fig. 874. Dark brown patina, partially dissolved. The axe is broken at the shaft tube and the butt is missing, the shaft tube ends are also missing. Long and sleeker than B10300a. Flanges from the edge to the shaft tube. Much of the decoration is gone, but can be reconstructed. The blade has a group of transverse lines near the edge, above this there are spirals in three groups, first six interconnected spirals in rows of three, then four interconnected spirals in rows of two, then a vertical row of five spirals at the narrowest point up to the shaft, which is ribbed with lines in relief. A pattern of lines and small bead-like borders can be seen around the shaftholes and on the sides.	Found in a water spring, Slettakjeldo, about 60 masl, near a scree. The axe was found together with a second axe, B10300a, and later a third axe, B10999 was found close by. The axes were found when the spring was widened and shored up, the gravel that was dug out contained the axes.
B10486	Dagger	Flint	EBA	Øvre Sekse	Ullensvang	Type VI a miniature, dark grey flint. Like Gjesing: Rogalands stenaldar fig. 209, but the blade is slimmer.	Found in soil heap when building the road, at Skutenes promontory.
B10612	Shafthole axe	Stone	LBA	Vik	Sveio	Rhombic axe, Rygh R37. Dark grey stone. The shafthole is symmetrical and drilled biconically	Found during construction work, 1 m deep in clay on the site of a house.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B10671	Socketed axe	Bronze	Period 5	Børve	Ullensvang	Patina has been removed, edge has traces of recent attempts at use. Similar to Montelius: Minne fig. 1172, but is longer and sleeker, and the edge is not as curved. There is a rather faint ridge around the socket from the loop. Part of the socket is missing, and this is due to a failed casting, in addition the loop is solid and is clearly not usable.	Found in smithy " years ago"
B10763	Dagger	Flint	EBA	Statsallmenningen	Eidfjord	Type VI b. Grey-brown flint, like Gjeving; Rogalands steinalder fig. 209, but the blade is somewhat wider towards the tip. The hilt has been used as a strike-a-light. The cross-section of the hilt is oval.	Found on the shore a few metres from and W of Hølsstryken, the mouth of Nordmannslågen. There is an old ford here. The dagger was found in-between sand and pebbles in an area where some digging had been done.
B10764	Shafthole axe	Stone	LBA	Sæd	Eidfjord	Unfinished axe of Manstrander's type E, Rygh R39, Baudou XV C 5. The shaft hole is marked by a small round depression, but is not finished. The sides have facets marked out, on one side this is polished, the rest of the axe is pecked.	Found while digging the foundations for a farm building

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B10770	Shafthole axe	Stone	BA	Sålesnes	Jondal	Polished rectangular axe. The top is slightly rounded, while the bottom is flat, the neck is rounded. The shaft hole has a small protrusion or ridge. Glob 1938.46. According to Glob, the date is transition Early-Late Bronze Age.	Found in a field close to the house, 20-30 cm deep.
B10810	Shafthole axe	Stone	LBA	Kvåle	Ulvik	Small axe, Manstrander type D, Rygh R37, Baudou XV B 1d, rhombic porphyry. Dark grey with lighter	Found while removing stones after cultivation, near a rock outcrop.
B10846	Dagger	Flint	EBA	Friija	Etne	Type Vib. Gjessing: Rogalands stenaldar fig. 209. The transition between hilt and blade is somewhat less marked. Grey flint	Found in gravel while digging a site for a house, about 30 masl, near the mouth of the river.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B10999	Shafthole axe	Bronze	Period 2	Lunde	Ølen	Decorated shafthole axe, type C (Aakvik 2000:21-23; Johansen 1984:136-7), similar to Montelius: Minnen fig. 870. The edge is missing, revealing that the axe is hollow. Dark brown patina, partially dissolved. Flanges along the sides. A transverse pattern of horizontal and vertical lines between and around the shaftholes. The shaft sockets have a ridge decorated with slanted lines at the ends, one socket is striated. Between the shaftholes and the butt there is a pattern of lines alternating with striated lines. The butt is decorated with a pattern of horizontal and vertical lines and ends in a protrusion decorated with horizontal and vertical lines. The collar has a pattern of triangles. Along the sides there is a border of nine spirals running from the shaftholes towards the edge. The decoration is not of the same quality as the other axes found in the spring.	Found in Slettakjeldo, in the same area as B10300a-b.
B11058	Dagger	Flint	EBA	Silda	Etne	Type VI a. The hilt is short with a rhombic cross-section. Most of the blade is now missing, but the dagger was complete when it was found.	Found in the ground east of and next to a large boulder.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B11070/a	Sickle	Flint	LN/EBA	Ljono	Ulvik	Fragment of sickle, one edge is almost straight, the other is curved. Light grey flint.	Found in field near barn.
B11070/b	Arrowhead	Quartz	LN/EBA	Ljono	Ulvik	Triangular arrowhead, colourless quartz.	Found in field, 20 m from barn
B11088	Bracelet	Gold	Period 5	Vilke	Sveio	Small bracelet of gold, oval cross-section, the terminals are rolled into spirals.	Found at the bottom of a slope near bothouses.
B11182/a	Ceramic pot	Clay	Period 5-6	Hysstad	Stord	Small pot, parallels are Baudou (1960) type XXVIII B 3 (pl. XX) except that the neck is shorter, and Müller 1891, plate XVI, no. 246. The clay is tempered with sand, brown on the outside, black core. Flat bottom, conical body and short, straight neck that narrows towards the rim, with marked shoulders. The neck is decorated with four vertical ribs, from the rim to the shoulders, three have been preserved, a black mark indicates the fourth rib. The body is decorated with five horizontal rows of nail imprints.	Found in chamber four in cairn at Hysstad. The urn contained cremated bones (B11182/b).

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B11183/a	Ceramic pot	Clay	Period 5-6	Hysstad	Stord	Small pot, parallels are Baudou (1960) type XXVIII B 3 (pl XX) except that the neck is shorter, and Müller 1891, plate XVI, no. 246. The clay is tempered with sand, brown on the outside, black core. Flat bottom, conical body and short, straight neck that narrows towards the rim, shoulders are slightly marked. The body is decorated with five horizontal rows of nail imprints.	Found in chamber three in cairn at Hysstad. The urn contained cremated bones (B11183/b) and shells (B11183/c).
B11184/a	Razor	Bronze	Period 4	Hysstad	Stord	Green patina, parallel sides that converge towards the handle. Some damage to one end. The handle curves up and out, ending in a small flat button. Parallels are Broholm, Danske Oldsager IV, fig. 46, and Baudous type XI A 3, pl VII.	Found in small stone cist, no urn. The bottom of the cist was filled with wood chips and birch bark was found around the edges. Cremated bones were found under the bottom slab.
B11534	Spoon shaped scraper (4)	Flint	LN/BA	Aksnes	Kvam	Four scrapers, all appear to be spoon shaped.	Found before 1900, no context.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B11616	Mould	Soapstone	BA	Ullensvang	Ullensvang	One half of a mould for a sword/dagger, showing the point of the object. The sides converge towards the point. A midrib is clearly marked. The date is a general Bronze Age date as it is not possible to identify the object and type.	No information
B11662	Socketed axe	Bronze	Period 4-6	Nes	Kvinherad	Small incomplete axe, Baudou's type VII C 2 b, but the edge is more curved and worn. The rim of the socket is missing.	Found on the shore below a gravel pit. There was a barrow in the gravel pit, a number of finds from the Iron Age are known.
B11680	Grooved axe	Stone	LBA	Åkra	Kvinherad	Grooved axe of Solberg type C2:1. Some damage, the groove is missing on one side and part of the side of the edge is missing. Some damage to the edge, which is blunt.	Found in the road next to the church yard wall.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B11805	Socketed axe	Bronze	Period 4	Hilksdal	Ølen	Axe similar to Baudou (1960) type VII C1 a. The sides are straight, ending in slight curves. There are three horizontal ridges beneath the mouth of the socket. The upper part of the broad side is decorated with a rhombic pattern, on both sides.	Found during ploughing in a boggy area, where there was a small hill and a large round stone. After the hill and stone had been removed, the axe was found in gravel. The spearhead B 12196 was found in the same area. There has been a small spring near the hill, periodically rather than permanent.
B12021/a-b	Bones	Bone	BA-1A	Eide	Kvam	Cremated bones, 185 gr.	The second cairn at Eide (Fett no 3/1), excavated by Haakon Schetelig 1905 and Perry Rolfsen 1967. The bones were found inside and around the remains of a cist made from slabs, high 1.7 metres, along with small pebbles.
B12139	Shaffhole axe	Stone	LBA	Innbjøa	Ølen	Fragment of porphyric axe of Baudou's type XV B 1d. Rygh's type R37, the side facets are somewhat shorter. Only the edge is preserved.	Found on the surface in an area below some large boulders, close to a spring. According to Fett (1971) it was found in a ditch leading from the spring. The catalogue says that it was in a wet area.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B12196	Spearhead	Bronze	Period 3	Hilsdal	Ølen	Spearhead similar to Rygh fig 111, but shorter and the edges are more curved. Brown patina. Remains of a wooden shaft (ash) were found inside the socket. Rivet holes on the socket, below these there is a set of six parallel horizontal lines, and there is a ridge around the mouth of the socket. There is also a set of parallel lines running along the edges down to the rivet holes.	Found in a potato field, about 30 metres from the small hill where B11805, socketed bronze axe was found.
B12344	Dagger	Flint	EBA	Eide	Kvinherad	Type Vtd, Lomborg 1973. The blade has been extensively resharpened and measures about 5 cm. The end of the handle has been used as a strike-a-light.	Found after levelling the ground in preparation for house building, at "Skogly", Halsney.
B12690	Dagger	Bronze	Period 2-3	Sorheim	Etne	Blade of a dagger with organic hill. Midrib along the blade on both sides. Two rivet holes on the hafting plate. Some damage to the sides, otherwise the blade is complete. Previously kept at the museum of Stavanger, with the number SM 2849.	Possibly from a barrow. "Garahaugen". The dagger was found in a chamber that contained ash/charcoal. The Garahaugen mound had a central chamber containing a mixture of soil, sand and clay, cleaned cremated bones and charcoal; it had also been disturbed by treasure hunters. The charcoal was dated to 3330±80BP/1460-1300 cal BC (T 858). The Garahaugen barrow had been disturbed, it is clearly a cremation, which is consistent with the sparse information on the dagger.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B13626/1	Pottery shards	Clay	Period 5-6	Sydnes	Kvinnherad	Twenty pottery shards, including four shards of the rim. Largest shard is 11 cm. The clay is tempered with quartz. The pot had a handle, the bottom was round, and there was a belt of decoration from the rim to the shoulder, consisting of bands of horizontal lines, oblique lines forming triangles and finally a band of vertical lines. A parallel can be found in Broholm 1946:137, grave 1751 (cf. Østerdal 1999:60). More shards were found some time later, B14262.	Found in a small chamber in a cairn at Sydnes. The chamber also contained charcoal, cremated bones, shells and a piece of cord.
B13626/2	Twisted cord	Unknown	Period 5-6	Sydnes	Kvinnherad	Double twisted cord, possibly made from plant fibre.	Found in a small chamber in a cairn at Sydnes. The chamber also contained charcoal, shells, cremated bones and pottery shards (B13626 and B14262)
B14262/1	Pottery shards	Clay	Period 5-6	Sydnes	Kvinnherad	13 pottery shards, same as B12626 and part of the same pot. Tempered with quartz. Largest shard is 5 cm.	Found in a small chamber in a cairn at Sydnes. The chamber also contained charcoal, cremated bones, shells and a piece of cord.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B14262/2	Pottery shards	Clay	Period 5-6	Sydnes	Kvinnherad	15 pottery shards, decorated with lines. Same as B12626 and part of the same pot. Tempered with quartz.	Found in a small chamber in a cairn at Sydnes. The chamber also contained charcoal, cremated bones, shells and a piece of cord.
B14262/3	Shells	Shell	Period 5-6	Sydnes	Kvinnherad	Six small pieces of shells, similar to mother-of-pearl	Found in a small chamber in a cairn at Sydnes. The chamber also contained charcoal, cremated bones, and a piece of cord.
B14262/4	Bones	Bone	Period 4-6	Sydnes	Kvinnherad	Six fragments of cremated bone.	Found in a small chamber in a cairn at Sydnes. The chamber also contained charcoal, shells and a piece of cord.
B15178/1-8	Debitage, scraper, flakes, cores	Flint, quartzite	BA-IA	Spissoy Nedre	Bømlo	Cores, core fragments, blades, a scraper, hammer stones	Site 6 at Kobbavågen, excavated as part of the Trekaantsambandet project. There was no diagnostic material, a charcoal sample from a test pit gave 2530±150 BP/ cal BC 820-405 (Beta-78706), at the transition between the Bronze Age and Iron Age.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B15182/1-4	Blades, cores, debitage	Flint	LN-EBA	Spissoy Øvre	Bømlo	Two blades, cores, some retouched flakes as well as debitage with no retouch.	A small rock shelter at Store Skiftesvika, 14 masl, excavated as part of the Trekantsbandet project. Charcoal from a hearth gave 3130±60 BP/cal BC 1500-1395 (Beta-95513), another sample from a charcoal layer gave 3540±50 BP/ cal BC 1900-1750 (Beta-72872).
B1520/1-12	Arrowheads, blades, cores, debitage	Flint, slate	LN-PRIA	Føyno	Stord	No diagnostic material other than the arrowheads, which can only be given a general date. Three lance-shaped arrows and one heart-shaped arrow, all are bifacial and are generally dated to the Late Neolithic and Bronze Age.	Site 37 at Kjøttvika, excavated as part of the Trekantsbandet project. Three hearths were found, the finds were scattered on the site. Charcoal samples gave 2010±70 BP/cal BC 60-cal AD 75 (Beta-91277), 2240±50 BP/cal BC 380-195 (Beta-91276), 2280±50 BP/cal BC 375-190 (Beta-91279), 2170±50 BP/cal BC 350-150 (Beta-91278). The arrowheads indicate the Late Neolithic and Bronze Age. Possibly several phases at the site.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B15211/1-8	Arrowhead, blade, cores, debitage	Flint	LN-PRJA	Føyno	Stord	The arrowhead is of a type that is generally dated to the Late Neolithic and Bronze Age.	Site 50 at Nautøysundet, excavated as part of the Trekantsambandet project. The material found at the site indicates use in several phases from the Mesolithic to the Iron Age. A bifacial arrowhead with concave base is dated to the LN-BA, the radiocarbon date indicates the Iron Age: 1970±100 BP/cal. BC 5-cal AD 210 (Beta-78815)
B15291/1-11	Blades, scraper, debitage	Flint, pumice	LBA-PRJA	Føyno	Stord	No clear diagnostic material. Some flakes and blades were retouched, there were also core fragments, pumice and hammer stones.	Site 116 at Nautøysundet was excavated as part of the Trekantsambandet project. A possible post hole and a cooking pit were found, a sample from the pit gave 2980±100 BP/cal BC 755-375 (Beta-74482), the transition to the Early Iron Age.
B15308	Dagger	Flint	EBA	Hamarhaug	Kvinherad	Type VI a. Some resharpening of the blade. Otherwise the dagger is complete.	Found in a stone wall between two farms.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B15396	Dagger	Flint	EBA	Gjelmervik	Etna	Type VI b. The blade has been extensively resharpened, and the handle is heavily worn, otherwise the dagger is complete.	Found in a field, "Grytungen".
B15403/1-17	Pottery shards	Clay	EBA	Tjelmeland	Etna	Shards of asbestos pottery, probably several vessels. Greyish-brown colour, no decoration. Tempered with quartz as well as asbestos. More trenches were opened during the excavation, uncovering more pottery, asbestos, flint and firecracked stones. Two radio carbon samples: 3060±35 bp/cal BC 1415-1165 (T-11970) and 2995±35 bp/cal BC 1265-1143 (T-11971).	Found during a survey and subsequent small excavation. In trench 1, a grey-black cultural layer was discovered. The finds were made in this layer. More trenches were opened during the excavation, uncovering more pottery, asbestos, flint and firecracked stones. Two radio carbon samples: 3060±35 bp/cal BC 1415-1165 (T-11970) and 2995±35 bp/cal BC 1265-1143 (T-11971).
B15403/21-36	Debitage, asbestos, nutshells	Flint, quartzite, asbestos, bone	EBA	Tjelmeland	Etna	Flint and quartzite debitage and one flint flake, some small burnt bones and small asbestos pieces, hazel nuts and some tiny pieces of wood.	Found during a survey and subsequent small excavation. In trench 1, a grey-black cultural layer was discovered. The finds were made in this layer. More trenches were opened during the excavation, uncovering more pottery, asbestos, flint and firecracked stones. Two radio carbon samples: 3060±35 bp/cal BC 1415-1165 (T-11970) and 2995±35 bp/cal BC 1265-1143 (T-11971).

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B15403/37	Fire cracked stones	Stone	EBA	Tjelmeland	Etna	Fire cracked stones, most likely from cooking pits.	Found during a survey and subsequent small excavation. In trench 1, a grey-black cultural layer was discovered. The finds were made in this layer. More trenches were opened during the excavation, uncovering more pottery, asbestos, flint and firecracked stones. Two radio carbon samples: 3060±35 bp/cal BC 1415-1165 (T-11970) and 2995±35 bp/cal BC 1265-1143 (T-11971).
B15667	Arrowhead, pottery shards, debitage	Flint, clay	BA	Fijjar	Fijjar	A small bifacial arrowhead with concave base that is usually dated to the Bronze Age. In addition a number of flakes, two shards of undecorated pottery, and two fragments of Neolithic axes.	Excavation of several cooking pits in central Fijjar. No houses were found. Neolithic material was also found, indicating an earlier settlement in the vicinity. Three samples from cooking pits gave 3020±50 BP/cal BC 1400-1110 (Beta-110359), 2590±90 BP/cal BC 795 (Beta-119798), 2580±120 BP/cal BC 790 (Beta-119799).

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B16108	Blade, core	Flint, quartzite	LN-EBA	Aga	Ullensvang	Blade fragment with retouch and a quartzite fragment of a core.	Found during survey at Aga. The site was later excavated, uncovering a fossilised field, a ditch and a series of cooking pits. A sample taken from a layer of the field gave 3460±90 BP/cal BC 1940–1520 (Beta-211723), two samples taken during survey gave 3400±80BP/cal BC 1755–1535 (T-16559) and 3235±95 BP/cal BC 1615–1410 (T-16560).
B16156/1-5	Pottery shards, clay, bones	Clay, bone	BA	Kvitevoll	Kvinherad	The pottery shards are from pots tempered with either asbestos or sand/quartz, the quality ranging from coarse to fine. The colour is black or red. Some shards are decorated with lines. A piece of glazed clay was found, possibly a piece of a crucible. Also pieces of clay, some with imprints of twigs, as well as some burnt and unburnt bone fragments. Note: B16155, Neolithic material, was found in the same area.	Finds from a cultivation layer from the Bronze Age, structures 2, 3 and clay pits, structures 28, 29, at Kvitevoll.
B16157/1-21	Arrowheads, debitage, asbestos	Flint, quartzite, quartz, asbestos	BA	Kvitevoll	Kvinherad	Two bifacial arrowheads, one with concave base and one with convex base. In addition flint, quartz, quartzite debitage, some flakes with retouch, and a piece of asbestos.	Finds from a cultivation layer from the Bronze Age, structures 2, 3.

B-number	Artefact	Material	Date	Farm	Municipality	Description	Context
B16202/1-26	Cores, blades, debitage	Flint, quartz, chert, rhyolite, greenstone	Neolithic-BA	Kvitevoll	Kvinnherad	Cores and core fragments, blades and flakes, mostly Neolithic, but some objects might be from the Bronze Age.	Finds made during the mechanical stripping of topsoil, no context.
B16204	Pottery shards	Clay	BA	Kvitevoll	Kvinnherad	Three shards of grey pottery, tempered with quartz.	Found in the fill in a post hole in house no 8. Radiocarbon dates indicate an EBA date: 3110±40 BP/cal BC 1420-1380/1440-1290 (Beta-198118).
B16205	Bone fragments	Bone	BA	Kvitevoll	Kvinnherad	Burnt bone fragments.	Found in two post holes in house 10. Charcoal from one of the post holes gave 2990±40/cal BC 1290-1140, cal BC 1380-1100.
B16210	Pottery shards, bones, clay	Clay, bone	BA-1A	Kvitevoll	Kvinnherad	Pottery shards, burnt and unburnt bones, pieces of clay, a lump of clay, sand and slag.	From structures with no secure context or found after mechanical stripping.
B16556/1-9	Arrowheads, pottery shards, burnt bones, debitage	Flint, quartzite, clay	BA	Skåla	Kvinnherad	Pottery shards, some decorated with lines. Tempered with asbestos or quartz/sand, the colour ranges from red and black to grey. Also, flint flakes and blades, a fragment of a bifacial arrowhead, burnt bones, slag and nut shells.	Finds from structure A501 at Skåla, Kvinnherad. The structure is dated to the Late Neolithic/Early Bronze Age: 3580±50 BP, BC 2110-2100/2040-1860/1770 (Beta-249035), and 3600±60 BP, BC 2130-1860/1850+/-1770 (Beta-249036). The close dates indicate a short period of use. Possibly a burial, but cannot be definitely determined.

C16873 (Oslo) Dagger Flint EBA Hardangervidda Eidfjord Type VI, like Rygh fig 65. The grip is slightly wider at the top. The blade is small due to extensive resharpening. Found somewhere between two valleys, the Bjoreidal and Hjelmedalen, on Hardangervidda.

Metal objects

B-number	Artefact	Farm	Municipality	Date	Measurement	Context
B01006	Socketed axe	Seim	Odda	Period 3	L: 10,4 cm, W: 4,2 cm	Said to have been found in a barrow before 1841, but this is uncertain. According to Fett (1954), it might also have been found in the ground.
B01008	Sword	Lekve	Ulvik	Period 6	L: 81,5 cm	Found in a crack in the stone in the mountains, near a summer farm, 450 m.a.s.l.
B01825	Sword	Rimbareid	Fijjar	Period 3	L: 46 cm	Found in cairn at Rimbareid, near Fijjar church, most likely the Rimsvarden cairn. The owner of a tavern dug into the cairn and found a chamber in which there was a sword and a dagger, as well as charcoal. The sword was used to cure sickness and ease childbirth. In 1866, B1825 was handed in to the museum and noted as having come from a farm at Stord. According to Per Fett (1973), the tavern owner's daughter was married to a man from this farm, and she was a midwife. Thus it is very likely that B1825 did indeed come from Rimsvarden.
B03389	Shaft-hole axe	Kvale (Areko)	Ullemsvang	Period 1B	L: 17,5 cm, W: 5 cm	Found near an outcrop, "Brynefjellet".
B04299	Dagger	Nordhuglo	Stord	Period 2-3	L: 21cm, W: 3,3 cm	Found in burial chamber in cairn in 1882.
B04954	Sword blade	Servoll	Bømlo	Period 2	L: 62,5 cm	Found in a ditch in a peat bog. c. 1893.
B05929	Socketed axe	Unknown	Unknown	Period 5	L: 12,8 cm, W: 4,9 cm	No information. Kept at Rosendal Barony, probably found at or near barony.
B05932/a	Bronze fragments	Eide	Jondal	Period 4-6	-	Found in cairn (Fetts no 3/2) along with two urns and cremated bones (B05932/b-d).
B05940	Spearhead	Tjeldflott	Ene	Period 6	L: 28 cm, W: 4,3 cm	Found in gravel on a slope, many stones and outcrops. Possible votive deposit
B05962/a	Pin	Vestbøstad	Fijjar	Period 4-5	L: 13,1 cm	Found in burial chamber in cairn

B-number	Artefact	Farm	Municipality	Date	Measurement	Context
B05962/b	Button	Vestbøstad	Fijjar	Period 4-5	L: 1,6 cm, W: 2,7 cm	Found in burial chamber in cairn
B05962/c	Tweezers	Vestbøstad	Fijjar	Period 4-5	L: 4,9 cm, W: 0,7-1,2 cm	Found in burial chamber in cairn
B05962/d	Knife/razor	Vestbøstad	Fijjar	Period 4-5	L: 7,3 cm, W: 2,8 cm	Found in burial chamber in cairn
B06759	Spearhead	Nesbø	Fijjar	Period 3	L: 13,3 cm	Found in a heap of earth in a peat bog. There are two peat bogs, one near the farm houses and one higher up in the mountains according to Per Fett (1973).
B06877/a	Neckring	Vikedal	Kvam	Period 6	W: 14 cm	Found in gravel under a rock, about 7 m.a.s.l. and 50 metres from the sea.
B06877/b	Neckring	Vikedal	Kvam	Period 6	W: 14,5 cm	Found in gravel under a rock, about 7 m.a.s.l. and 50 metres from the sea.
B06877/c	Neck ring	Vikedal	Kvam	Period 6	W: 15 cm	Found in gravel under a rock, about 7 m.a.s.l. and 50 metres from the sea.
B06877/d	Pin	Vikedal	Kvam	Period 6	W: 8 cm, L: 10,5 cm	Found in gravel under a rock, about 7 m.a.s.l. and 50 metres from the sea.
B06877/e	Pin	Vikedal	Kvam	Period 6	W: 8 cm, L: 10,5 cm	Found in gravel under a rock, about 7 m.a.s.l. and 50 metres from the sea.
B07364	Shafthole axe	Rimbareid	Fijjar	Period 2	L: 34,5cm, W: 12,8 cm	Found in or near water spring, in clay under about 1 metre of soil in a boggy area. The clay was blue from verdigris.
B07656/b	Razor	Grindheim	Eine	Period 5	L: 5,8 cm, W: 0,8-1,4	Burial, found in stone cist in ploughed-out barrow. The cist was filled with charcoal and soil. The razor was placed inside a pot. Other finds: pot, cremated bones and charcoal.
B08088	Dagger	Utne	Ullensvang	Period 2	L: 17,6 cm	Burial. Found in stone cist in large cairn, 1930. Report Jøls Boe 6/9/1930. Nesjareyst, Neset. A number of cairns were located on the promontory, removed before 1880.

B-number	Artefact	Farm	Municipality	Date	Measurement	Context
B09097	Neck ring	Støle	Eine	Period 6	Diameter 22,4 cm	Found during digging along the foot of an outcrop. The ring was placed on a large stone in a layer of soil, there was a layer of peat on top of the soil.
B10267	Socketed axe	Kvamsøy	Kvam	Period 5	L: 5,6cm, W: 3,8 cm	No information.
B10300/a	Shaft-hole axe	Lunde	Ølen	Period 2	L:29,5 cm, W:6,8 cm	Found in a water spring, Slettakjelde, about 60 msl, near a serec. The axe was found together with a second axe, B10300b, and later a third axe, B10999 was found close by. The axes were found when the spring was widened and shored up, the gravel that was dug out contained the axes.
B10300/b	Shaft hole axe	Lunde	Ølen	Period 2	L:21,1 cm, W: 7 cm	Found in a water spring, Slettakjelde, about 60 msl, near a serec. The axe was found together with a second axe, B10300a, and later a third axe, B10999 was found close by. The axes were found when the spring was widened and shored up, the gravel that was dug out contained the axes.
B10671	Socketed axe	Børve	Ullensvang	Period5	L: 10 cm, W: 5,6 cm	Found in smithy " years ago"
B10999	Shaft-hole axe	Lunde	Ølen	Period 2	L:24,5 cm, W: 5,5 cm	Found in Slettakjelde, in the same area as B10300a-b.
B11088	Bracelet	Vikse	Sveio	Period 5	8 cm across	Found at the bottom of a slope near boathouses.
B11184/a	Razor	Hysstad	Stord	Period 4	L:8,8 cm, W:1,4-2,2 cm	Found in small stone cist, no um. The bottom of the cist was filled with wood chips and birch bark was found around the edges. Cremated bones were found under the bottom slab.
B11662	Socketed axe	Nes	Kvinnherad	Period 3	L: 8.1 cm, W: 3.2-4.7	Found on the shore below a gravel pit. There was a barrow in the gravel pit, a number of finds from the Iron Age are known.

B-number	Artefact	Farm	Municipality	Date	Measurement	Context
B11805	Socketed axe	Hiksdal	Ølen	Period 4	L: 11.3 cm, W: 3.3-3.8	Found during ploughing in a boggy area, where there was a small hill and a large round stone. After the hill and stone had been removed, the axe was found in gravel. The spearhead B 12196 was found in the same area. There has been a small spring near the hill, periodically rather than permanent.
B12196	Spearhead	Hiksdal	Ølen	Period 3		Found in a potato field, about 30 metres from the small hill where B11805, socketed bronze axe was found.
B12690	Dagger	Sørheim	Ene	Period 2-3	L: 13 cm	Possibly from a barrow, "Garahaugen". The dagger was found in a chamber that contained ash/charcoal. The Garahaugen mound had a central chamber containing a mixture of soil, sand and clay, cleaned cremated bones and charcoal; it had also been disturbed by treasure hunters. The charcoal was dated to 3330±80BP/1460-1300 cal BC (T 858). The Garahaugen barrow had been disturbed, it is clearly a cremation, which is consistent with the sparse information on the dagger.

Stone axes

B-number	Artifact	Date	Measurement	Farm	Municipality	Description	Context
B00074	Shaft-hole axe	LBA	L: 18.2 cm	Opedal	Ullensvang	Marstrander's type E, Rygh's R39. Baudou's type XV C5. Grey with lighter specks. The shaft hole is unfinished. The sides of the axe leading to the edge are faceted.	According to Fett (1954), the axe is said to have come from a large mound, along with a knife blade. The original catalogue entry says nothing about the context.
B02879	Grooved axe	LBA	L: 12.5cm, W: 6 cm	Langeseter	Ullensvang	Solberg type C2:1 (Solberg 1988). Polished towards the edge, which is blunt.	No information
B04541	Shaft-hole axe	LBA	L: 15,3 cm, W: 3,5-5,4 cm	Y stås	Granvin	Egg-shaped polished axe, dark grey quartzite. Marstrander's type E (1983), Baudou's type XV D (1960). Round neck and blunt edge.	Found at Gilsbrekkene, near a gully and near cracks or the entrance to small caves (Fett 1954), but the exact location is no longer known.
B04730	Shaft-hole axe	LBA	L: 13.7 cm, W: 2.7-5.7 cm	Ljones	Kvam	Dark porphyrite with lighter specks. Marstrander's type D, Baudou's type XV B1d. Rectangular cross-section, slightly rounded neck, the sides are polished facets so as to create "shoulders" on either side of the shaft hole. Blunt edge.	Found in the sea in mint condition, off Vikingsnes promontory.
B04918	Grooved axe	LBA	L: 16,2 cm, W: 6,4 cm	Unknown	Odda	Marstrander's type F, Rygh R 16, Solberg's type D2 (1988). Sandstone. On one side part of the axe is missing. Blunt edge.	No information

B-number	Artefact	Date	Measurement	Farm	Municipality	Description	Context
B05872	Shafthole axe	LBA	L: 4cm, W: 3 cm	Eide	Granvin	Fragment of miniature axe of Marstrander's type B or D, Rygh's R37, Baudou's type XV B 1d. Reddish-brown, porous stone. One half of the shaft hole is preserved, it measures 1 cm. Three sides are polished, with a thin incised line along the faceted side.	No information
B06088	Shafthole axe	LBA	L: 9 cm, W: 6,5 cm	Tveit	Jondal	One half of a polished egg-shaped axe, Marstrander's type E, Baudou's type XV D, gabbroporphyrite. Dark grey with lighter specks.	Found near the river.
B06203	Shafthole axe	LBA	L: 16,2 cm,W: 5,7 cm	Kråkevik	Ullensvang	Egg-shaped axe. Marstrander's type E, Baudou's type XV D, gabbroporphyrite. Dark grey with lighter specks. There is no shaft hole and the axe is not polished. Facets on either side of the edge, but they are not clearly marked. The edge is blunt.	Found under a large boulder which forms a small rock shelter
B06790	Shafthole axe	LBA	L: 15 cm	Raudstein	Kvinherad	Rhombic axe like Marstrander's type D (1983), Baudou's type XV B 1 (1960), Rygh R37, red sandstone. Faceted sides, the shafthole is barely started.	Found while building the barn.
B07355	Shafthole axe	LBA	L: 6.7 cm	Norheim	Kvam	Edge of a porphyritic axe, broken across the shafthole. Some damage to the edge, possibly from use. Rygh R37.	Found in a field

B-number	Artefact	Date	Measurement	Farm	Municipality	Description	Context
B07595	Shafthole axe	LBA	L: 24,5 cm, W: 6,9 cm	Nesheim	Granvin	Unfinished axe of Ryghs type R39, Marstrander's type E (1983), Baudou's type XV C5 (1960), dark grey with white specks, saussuritegabbro. There is no shaft hole. There are triangular facets or reliefs to either side of the edge, which is blunt.	Found in the mountains, near the railway, about 10 metres from the water, in clay under a large boulder in a scree. The exact location is no longer known.
B08694	Shafthole axe	LBA	L: 8.8 cm, W: 5.3 cm	Kaldheim	Etne	Fragment of egg-shaped axe, Marstrander's type E, Baudou's type VX D, broken in the shafthole. Parallel: Brøgger 1907:80. fig.51.	No information
B08979	Shafthole axe	LBA	L: 14,6 cm	Gjerstad	Tysnes	Rhombic stone axe, Rygh's type R37. A parallel is Montelius, Mjmmen, fig. 3.30, but the axe from Gjerstad has a shorter butt. The shafthole is unfinished. Defined shoulders and polished sides, square cross-section.	Found in a field
B09917	Grooved axe	LBA	L: 16,2 cm, W: 5,0-6,7 cm	Sandsto	Ullensvang	Polished grooved axe, Solberg's type D2, Marstrander type F. The axe tapers down from the top to the neck, from the shafthole.	Found while building a house, 20-25 msl, about 100 meters from the shore and near a brook, 20 cm deep in gravel.
B10086	Shafthole axe	BA	L: 5.7 cm	Halleland	Etne	Miniature rhombic axe, like Rygh's type R37, with marked shoulders and polished sides. Soapstone.) No decoration. Nissen Fett 1968, fig 16.	Found on a slope, plough depth.
B10612	Shafthole axe	LBA	L: 11,6 cm, W: 6,1 cm	Vik	Sveio	Rhombic axe, Rygh R37. Dark grey stone. The shafthole is symmetrical and drilled biconically	Found during construction work, 1 m deep in clay on the site of a house.

B-number	Artifact	Date	Measurement	Farm	Municipality	Description	Context
B10764	Shaft-hole axe	LBA	L: 19 cm, W: 4,9-6,4 cm	Sæd	Eidfjord	Unfinished axe of Manstrander's type E, Rygh R39, Baudou XV C 5. The shaft hole is marked by a small round depression, but is not finished. The sides have facets marked out, on one side this is polished, the rest of the axe is pecked.	Found while digging the foundations for a farm building
B10770	Shaft-hole axe	BA	L: 12,5 cm	Sålesnes	Jondal	Polished rectangular axe. The top is slightly rounded, while the bottom is flat, the neck is rounded. The shaft hole has a small protrusion or ridge. Glob 1938:46. According to Glob, the date is transition Early-Late Bronze Age.	Found in a field close to the house, 20-30 cm deep.
B10810	Shaft-hole axe	LBA	L: 13,6 cm	Kvåle	Ulvik	Small axe, Manstrander type D, Rygh R37, Baudou XV B 1d, rhombic porphyry. Dark grey with lighter	Found while removing stones after cultivation, near a rock outcrop.
B11680	Grooved axe	LBA	L: 12,3 cm, W: 4,4-6,1 cm	Åkra	Kvinherad	Grooved axe of Solberg type C2:1. Some damage, the groove is missing on one side and part of the side of the edge is missing. Some damage to the edge, which is blunt.	Found in the road next to the church yard wall.
B12139	Shaft-hole axe	LBA	L: 9,2 cm, W: 5,2 cm	Innbjøa	Ølen	Fragment of porphyric axe of Baudou's type XV B 1d, Rygh's type R37, the side facets are somewhat shorter. Only the edge is preserved.	Found on the surface in an area below some large boulders, close to a spring. According to Fætt (1971) it was found in a ditch leading from the spring. The catalogue says that it was in a wet area.

Flint daggers

B-number	Measurement	Farm	Municipality	Description	Context
B05599	L: 11cm, W: 3 cm	Gjerde	Ene	Type VI b. Small dagger, grey-brown flint.	Found in a field at Gjerde, south of the church.
B06264	L: 22 cm	Tufto	Odda	Type VI a, Rygh 64. Grey flint. Part of the hilt is missing.	No information
B06508	L: 14 cm	Fijje	Ene	Type VIa, Rygh fig. 64. Grey-yellow opaque flint, part of the blade is missing.	Found about 100 metres from the farm houses when clearing a field.
B07182	L: 14,8 cm	Myklebost	Kvinnherad	Type VI a. Grey flint. The hilt measures 7 cm and the end has been used as a strike-a-light. The blade has been extensively resharpened.	Found when harvesting potatoes in slightly sloping terrain, 25 masl and 200 metres from the sea.
B07644	L: 11,7 cm	Tokheim	Odda	Type VI a, Rygh fig. 64. The blade has been extensively resharpened	Found in red gravel, 30-40 masl.
B07759	L: 12 cm	Nervik	Ene	Type VI b, blade, similar to Gjessing: Rogalands stenaldar fig. 206. The tip and part of the hilt are missing	Found in a field close to the sea, in a place called Vårhaug
B08093	L: 10,7 cm	Viveld	Eidfjord	Type VI, cf. Gjessing: Rogalands steinaldler fig. 206. Grey flint, small.	No information
B08342	L: 13,8 cm	Utne	Ullensvang	Type VI b. Cf. Montelius: Minnen fig. 486. The dagger is complete, but has been sharpened	Found in an old field in a layer of gravel, about 80 cm deep and 7-8 metres from the site of the Nesjarøyssi cairn.
B08382	L: 9,8 cm	Nedre Sekse	Ullensvang	Type VI a, Miniature dagger. It has been resharpened. Rhombic cross-section. Brown-grey flint. Similar to Rygh fig. 73.	No information
B09289a	L: 17,2 cm	Nes	Kvinnherad	Type VI, like Gjessing: Rogalands stenaldler fig. 197. Brown flint	Found along with a fragment of a dagger in a field
B10075	L: 11,7 cm	Ølfernes	Kvinnherad	Type VI, Gjessing: Rogalands stenaldler fig. 201. Most of the blade is missing. Grey-white flint.	Found when clearing a field, 85 metres from the sea.
B10227	L: 19,4 cm	Ljosnes	Kvinnherad	Type VI, Gjessing: Rogalands stenaldler fig. 199. Part of the blade is missing. Grey-white flint.	Found when digging ditches, 1 metre deep, about 10 masl and 40 metres from the sea.

B-number	Measurement	Farm	Municipality	Description	Context
B10486	L: 10,7 cm	Øvre Sekse	Ullensvang	Type VI a miniature, dark grey flint. Like Gjessing; Rogalands stenaldar fig. 209, but the blade is slimmer.	Found in soil heap when building the road, at Skutenes promontory.
B10763	L: 18,6 cm, W: 3,8 cm	Statsallmenningen	Eidfjord	Type VI b. Grey-brown flint, like Gjessing; Rogalands stenaldar fig. 209, but the blade is somewhat wider towards the tip. The hilt has been used as a strike-a-light. The cross-section of the hilt is oval.	Found on the shore a few metres from and W of Holsstryken, the mouth of Nordmannslågen. There is an old ford here. The dagger was found in-between sand and pebbles in an area where some digging had been done.
B10846	L: 11cm, W: 3,1 cm	Fijja	Ene	Type VIIb. Gjessing; Rogalands stenaldar fig. 209. The transition between hilt and blade is somewhat less marked. Grey flint	Found in gravel while digging a site for a house, about 30 masl, near the mouth of the river.
B11058	L: 9,4 cm, W: 3,2 cm	Silda	Ene	Type VI a. The hilt is short with a rhombic cross-section. Most of the blade is now missing, but the dagger was complete when it was found.	Found in the ground east of and next to a large boulder.
B12344	L: 15,3 cm	Eide	Kvinnherad	Type VI d, Lomborg 1973. The blade has been extensively resharpened and measures about 5 cm. The end of the handle has been used as a strike-a-light.	Found after levelling the ground in preparation for house building, at "Skogly", Halsnoy.
B15308	L: 20,8 cm, W: 3,4 cm	Hannarhaug	Kvinnherad	Type VI a. Some resharpening of the blade. Otherwise the dagger is complete.	Found in a stone wall between two farms.
B15396	L: 14 cm, W: 3,2 cm	Gjelmervik	Ene	Type VI b. The blade has been extensively resharpened, and the handle is heavily worn, otherwise the dagger is complete.	Found in a field, "Grytingen".
C16873(Oslo)	L: 17,2 cm	Hardangervidda	Eidfjord	Type VI, like Rygh fig 65. The grip is slightly wider at the top. The blade is small due to extensive resharpening.	Found somewhere between two valleys, the Bjøretidal and Hjelmedalen, on Hardangervidda.

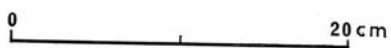
Appendix D

Plates

Tracings of rock art panels are reproduced here. Most have been scanned and reworked by the author, using Photoshop CS2. Trønd Lødøen has kindly provided tracings of recently discovered sites. All sites in the study area are not reproduced, this applies mainly to cup marked sites. There are several reasons for this. Many sites have been discovered in recent years and have not yet been fully documented. As many cup mark sites have only a few cup marks and some have only one cup mark, I have selected some representative sites rather than reproducing as many as possible.

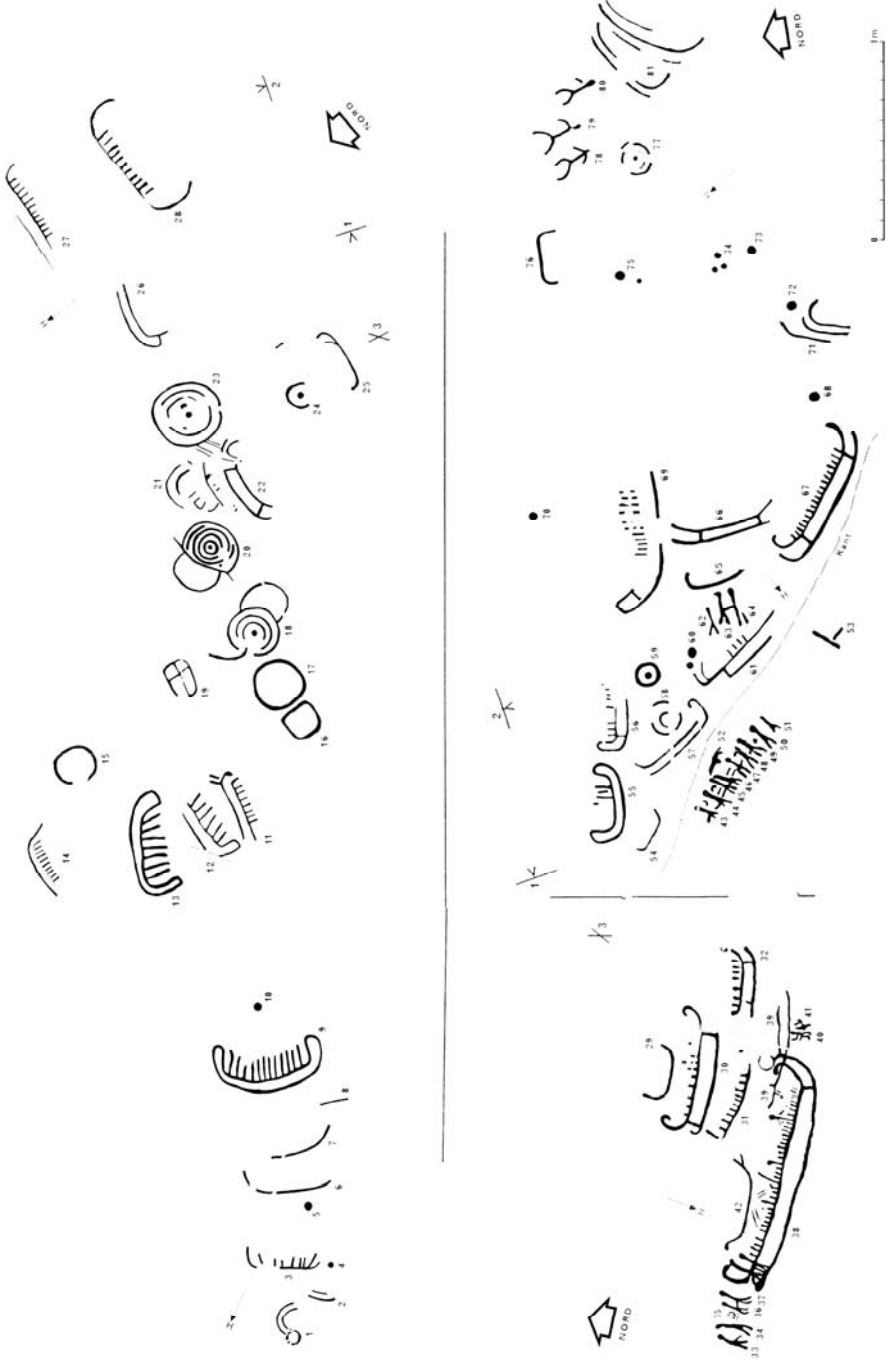
- Plate 1: Aga 1
- Plate 2: Bakke 1
- Plate 3: Bakke 2 and 3
- Plate 4: Bakke 4 and 6
- Plate 5: Berge
- Plate 6: Berge, detail, left part of the panel
- Plate 7: Berge, detail, right part of the panel
- Plate 8: Børve 1 and 4
- Plate 9: Fitja and Fjøsna 1
- Plate 10: Fjøsna 1
- Plate 11: Fjøsna 2
- Plate 12: Fjøsna 3, 4 and 5
- Plate 13: Flote 1
- Plate 14: Fonnaland and Frøyenes
- Plate 15: Hagen and Hallanger
- Plate 16: Halsnøy and Hammarhaug, part 1
- Plate 17: Hammarhaug part 2 and 3
- Plate 18: Hauso 1 and 3
- Plate 19: Haustveit A part 1 and 2
- Plate 20: Haustveit B, C, and D
- Plate 21: Linga 1, part A and B
- Plate 22: Linga 1 part D and Opheim
- Plate 23: Rykkje 1 and Sandstå 1
- Plate 24: Sekse 3
- Plate 25: Støle, part 1
- Plate 26: Støle, part 2
- Plate 27: Svolland 1 and Tesdal 2
- Plate 28: Tveito 1 and Ullshelleren
- Plate 29: Utbjoa 1 and 2
- Plate 30: Utbjoa 3 and 4
- Plate 31: Vangdal 1
- Plate 32: Vangdal 2
- Plate 33: Vik 1 A
- Plate 34: Vinje 1
- Plate 35: Vinje 3
- Plate 36: Årsand

PLATE 1



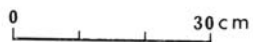
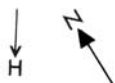
Aga 1 (Mandt Larsen 1972, pl 44a)

PLATE 2

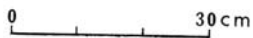
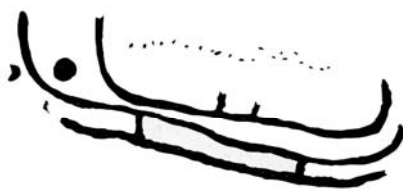
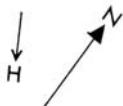


Bakke 1, western part. Tracings of figures that were discovered in 2000 are not yet available (Mandt Larsen 1972, pl 30)

PLATE 3

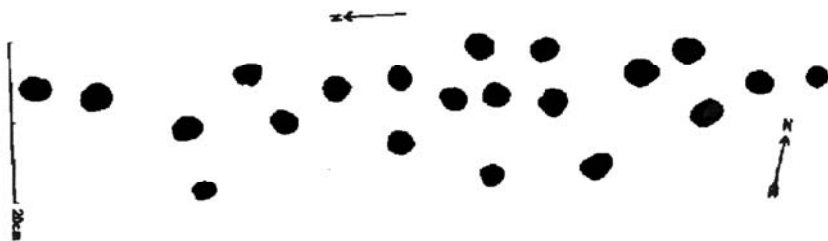


Bakke 2 (Mandt Larsen 1972, pl 32a)

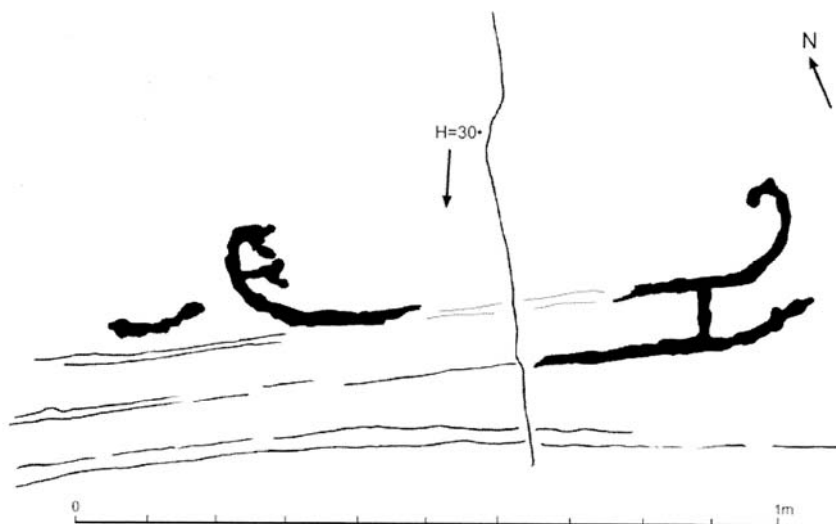


Bakke 3 (Mandt Larsen 1972, pl 32b)

PLATE 4

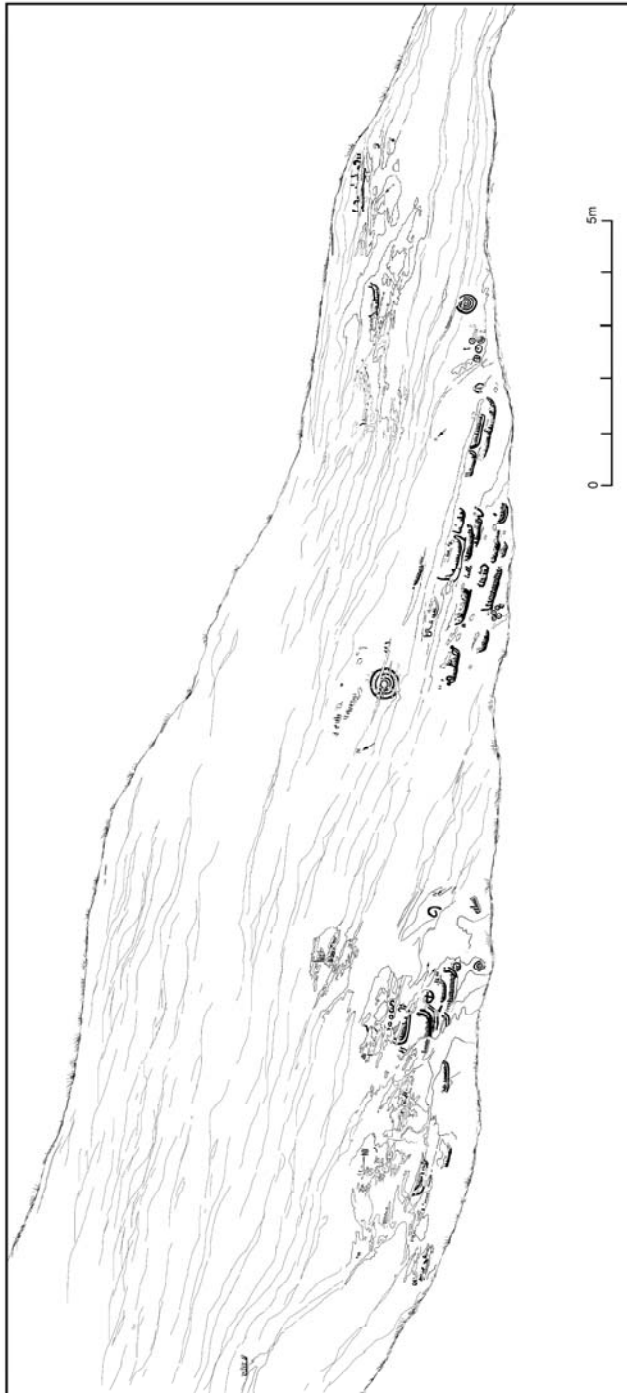


Bakke 4 (tracing by Johs Bøe, reproduced in Gundersen 2004)



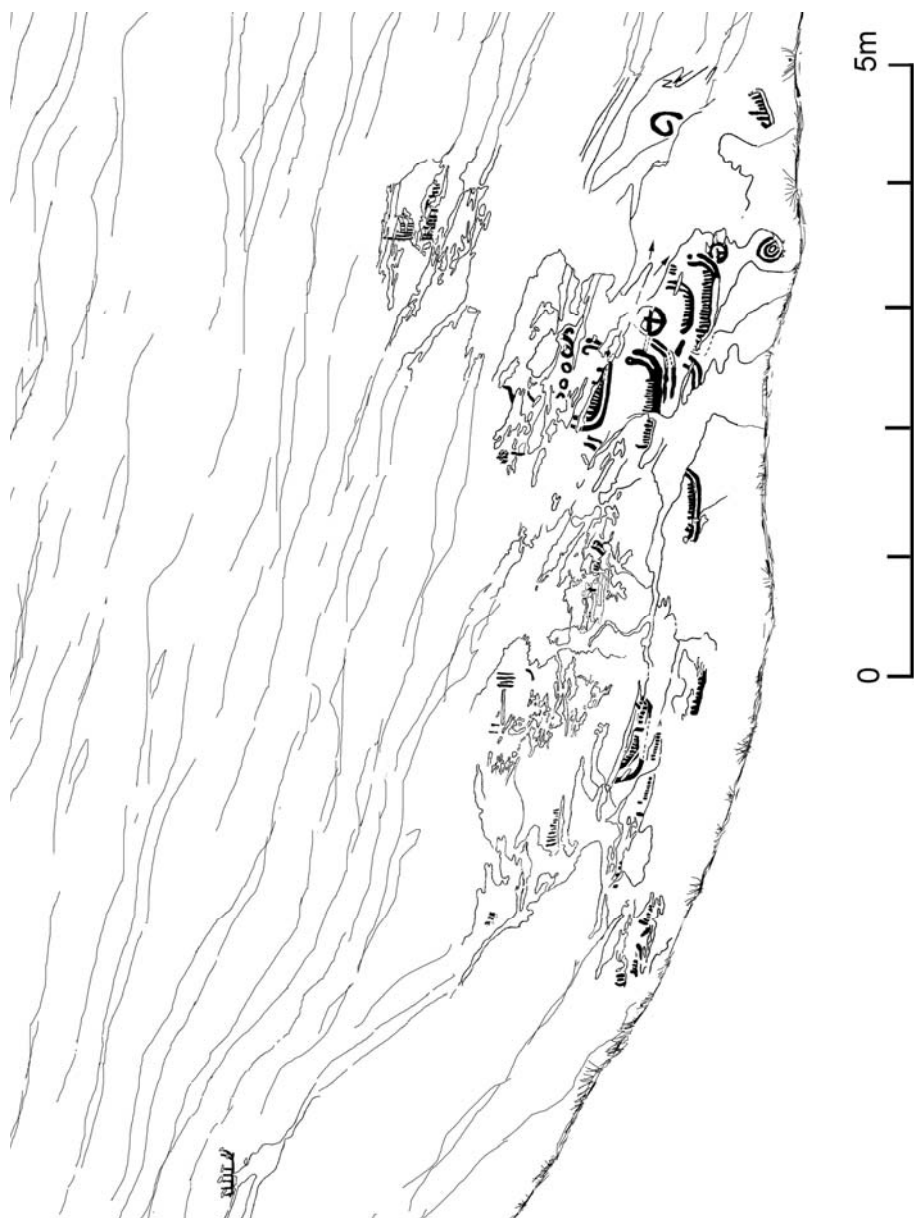
Bakke 6 (Gundersen 2004)

PLATE 5



Berge (Mandt and Lødøen 2005)

PLATE 6



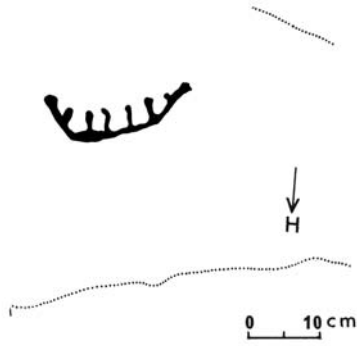
Berge, detail of left part of the panel.

PLATE 7

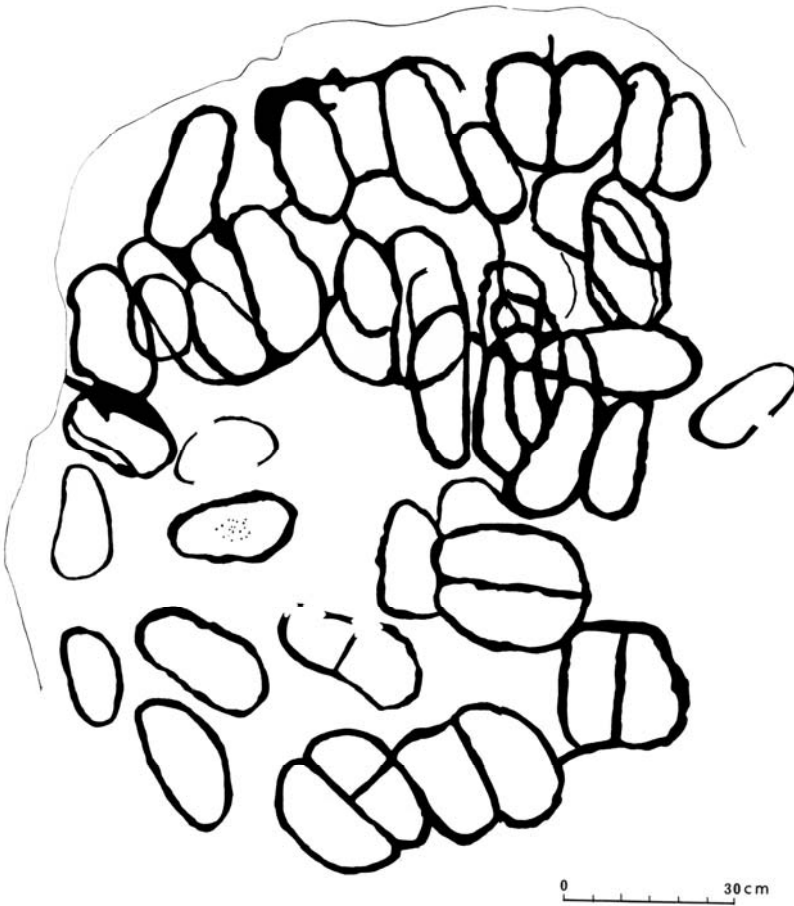


Berge, detail, right part of the panel

PLATE 8

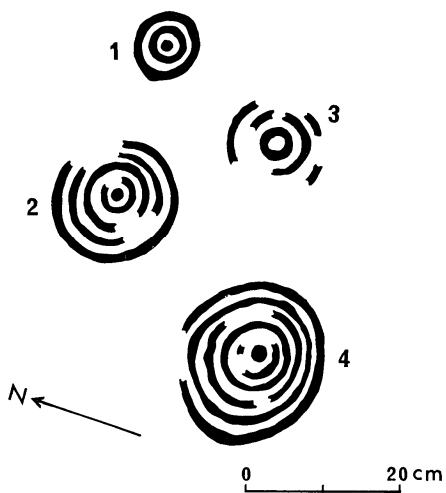


Børve 1 (Mandt Larsen 1972, pl 45a)

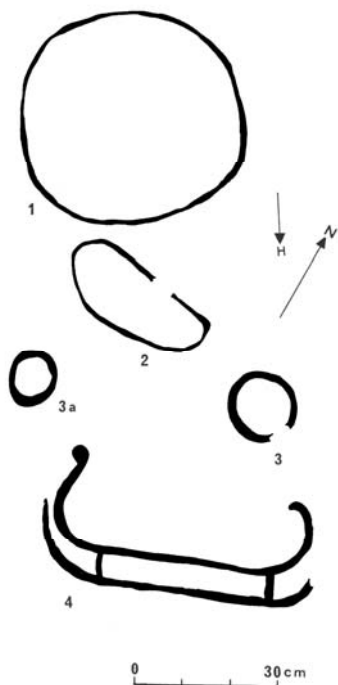


Børve 4 (Mandt Larsen 1972, pl 46)

PLATE 9

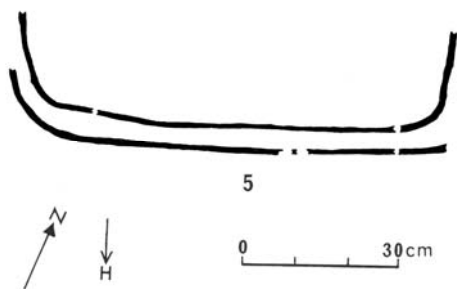


Fitja (Mandt Larsen 1972, pl 4a)

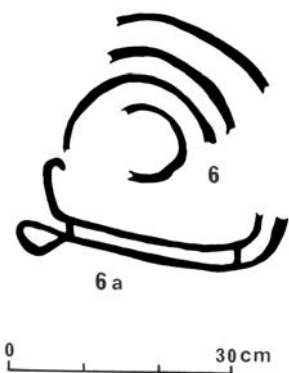


Fjøsna 1 (Mandt Larsen 1972, pl 5a)

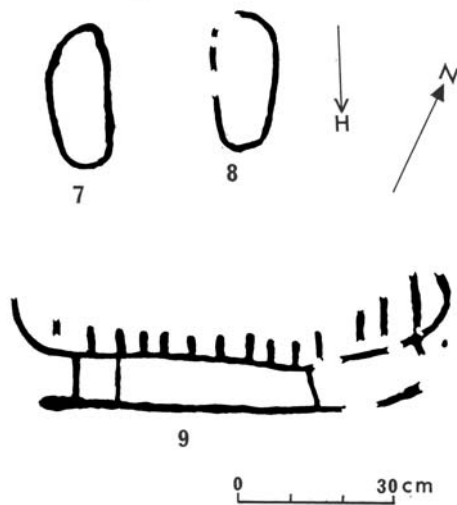
PLATE 10



Fjøsna 1, figure 5 (Mandt Larsen 1972, pl 5b)

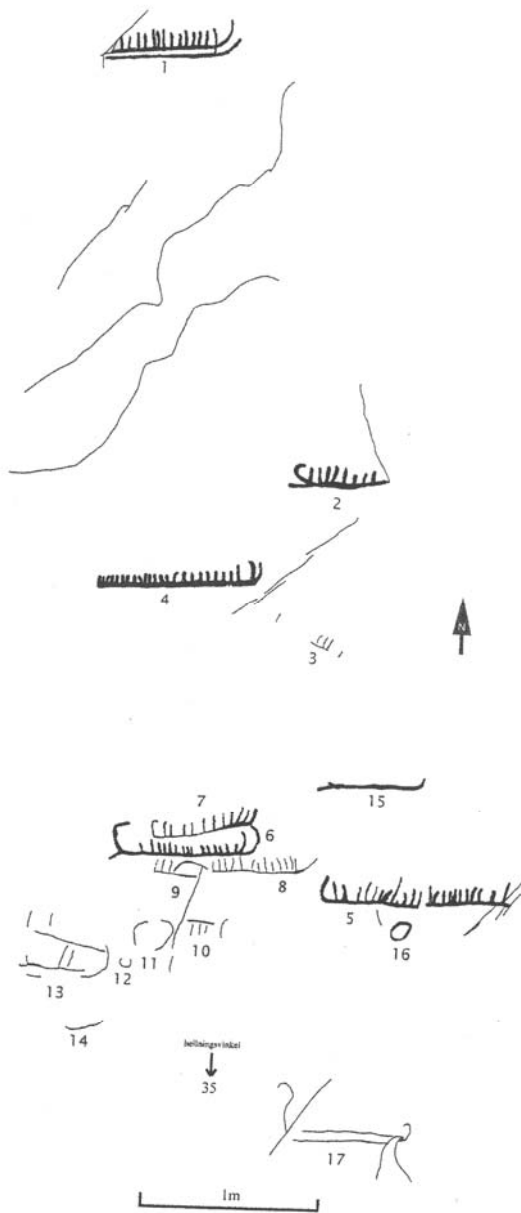


Fjøsna 1, figure 6 (Mandt Larsen 1972, pl 5c)



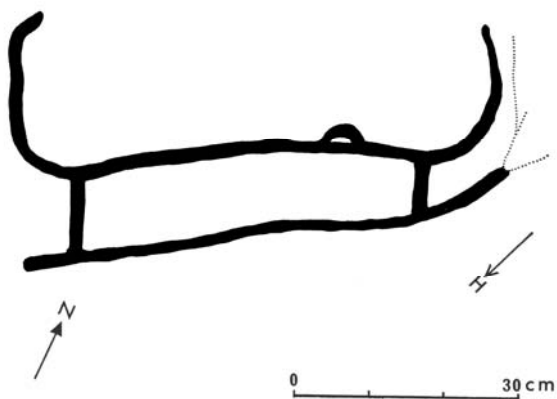
Fjøsna 1, figure 7-9 (Mandt Larsen 1972, pl 6a)

PLATE 11

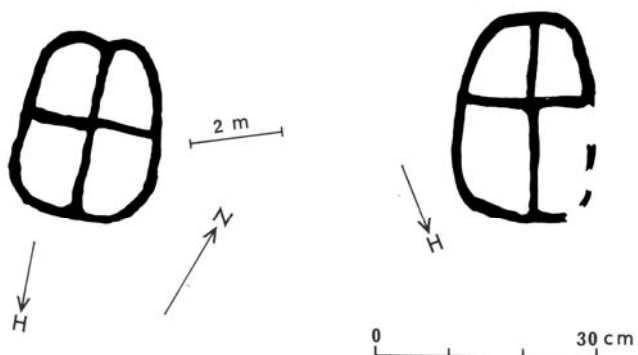


Fjøsna 2 (Gjerde 2000, figure 7.135)

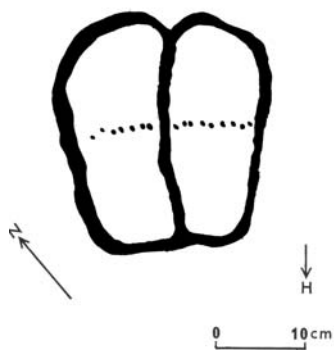
PLATE 12



Fjøsna 3 (Mandt Larsen 1972, pl 8a)

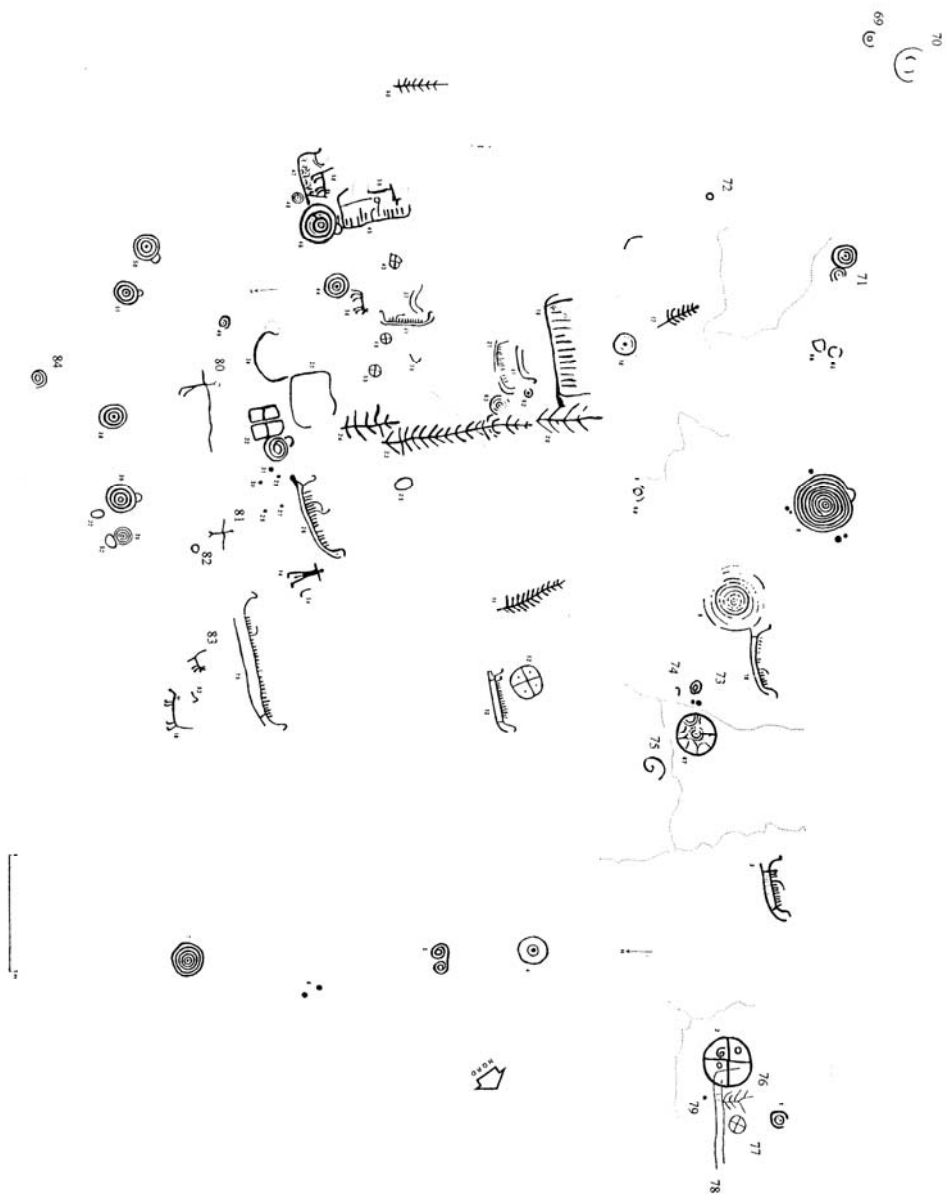


Fjøsna 4 (Mandt Larsen 1972, pl 8b)



Fjøsna 5 (Mandt Larsen 1972, pl 6b)

PLATE 13

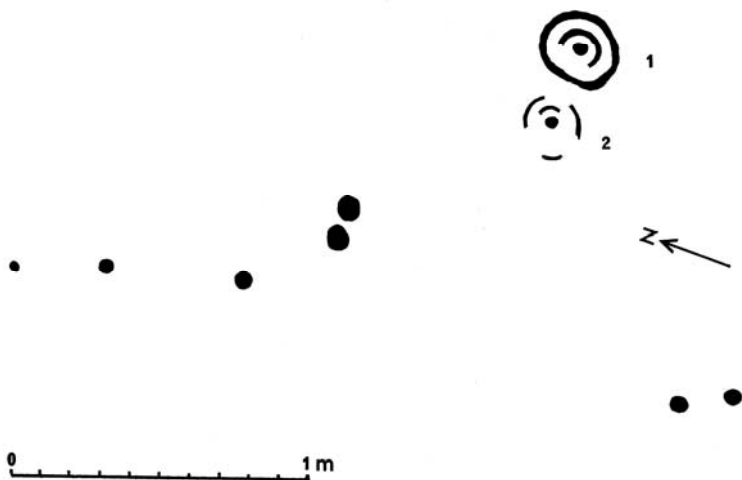


Flote 1, with new figures (reworked after Vevatne 1996, pl 6)

PLATE 14

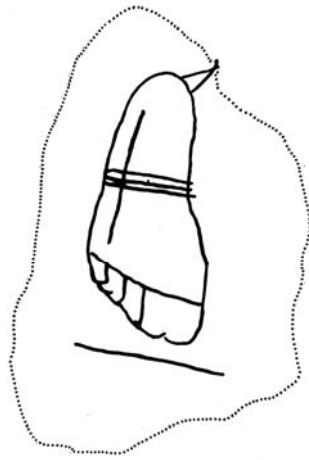


Fonnaland 1 (reworked after Nyland 2003)

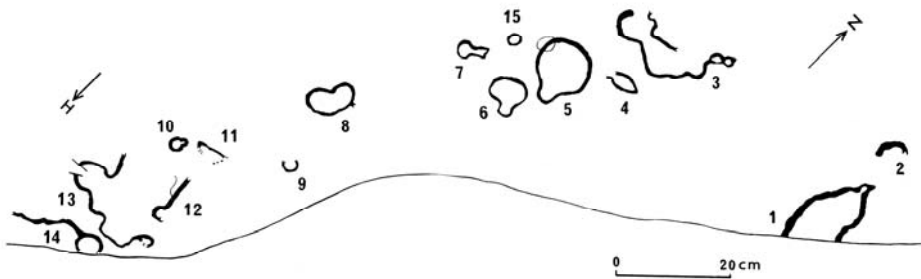


Frøyenes (Mandt Larsen 1972, pl 48a)

PLATE 15

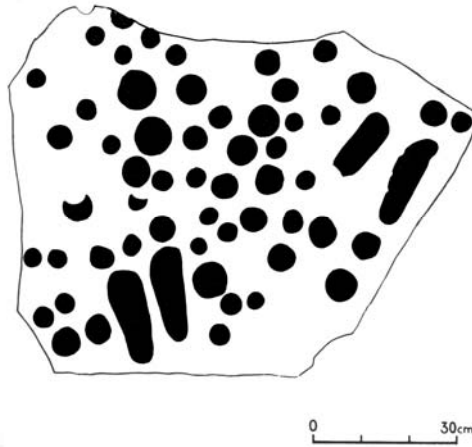


Hagen (Mandt Larsen 1972, pl 40a)

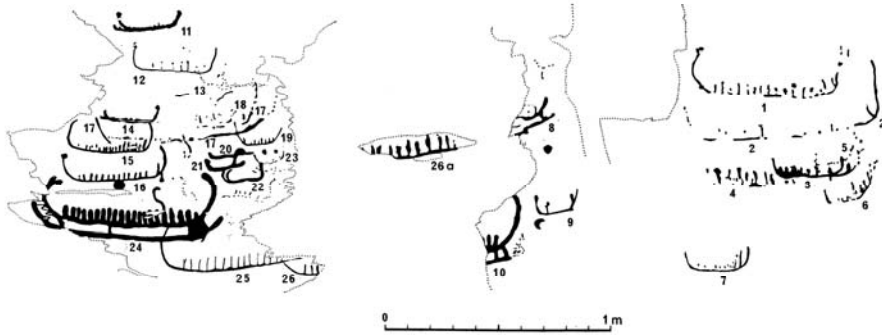


Hallanger (Mandt Larsen 1972, pl 56)

PLATE 16

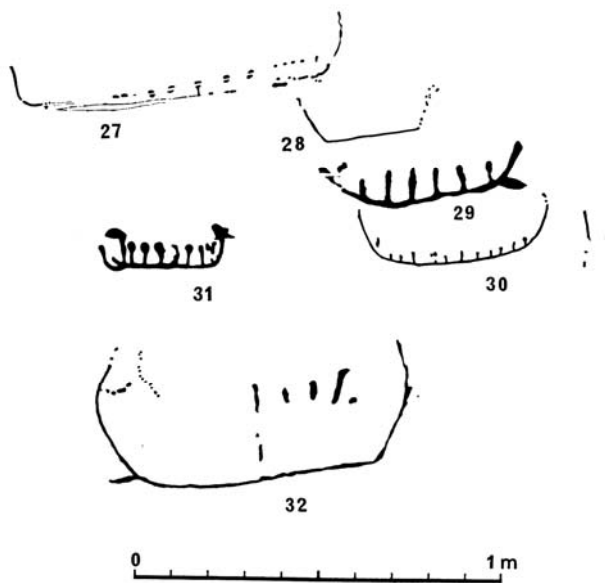


Halsnøy (Mandt Larsen 1972, pl 19b)

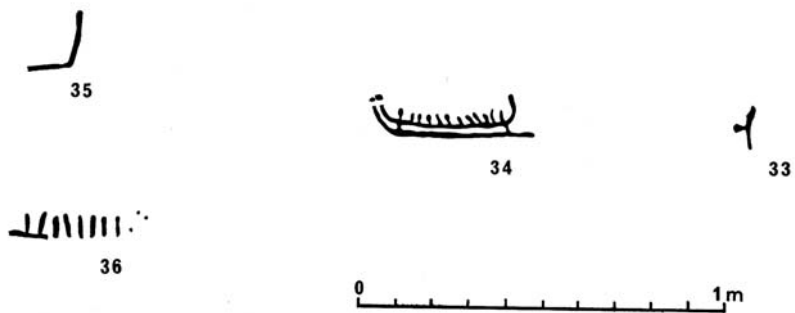


Hammarhaug, part 1 (Mandt Larsen 1972, pl 20)

PLATE 17

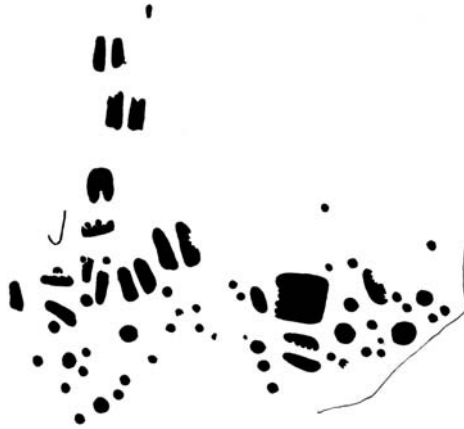


Hammarhaug, part 2 (Mandt Larsen 1972, pl 21a)

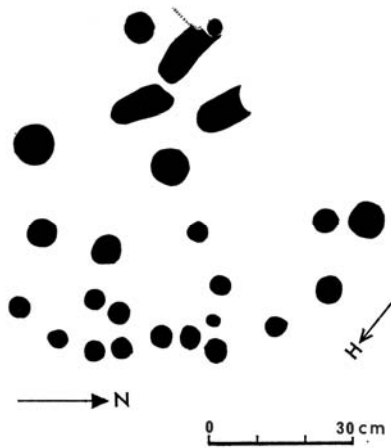


Hammarhaug, part 3 (Mandt Larsen 1972, pl 21b)

PLATE 18

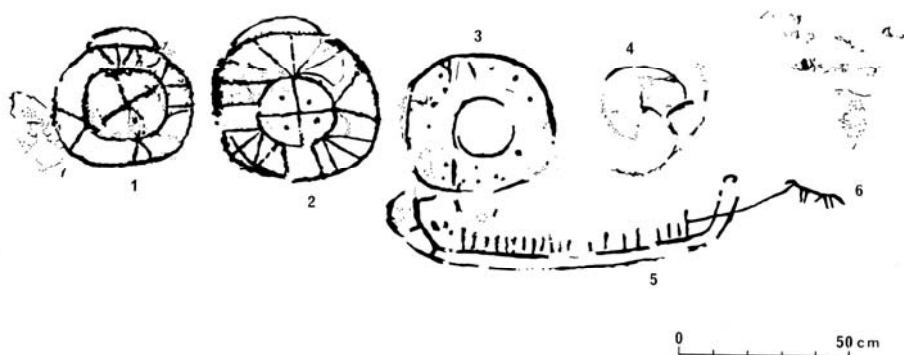


Hauso 1 (Mandt Larsen 1972, pl 49a)



Hauso 3 (Mandt Larsen 1972, pl 49b)

PLATE 19

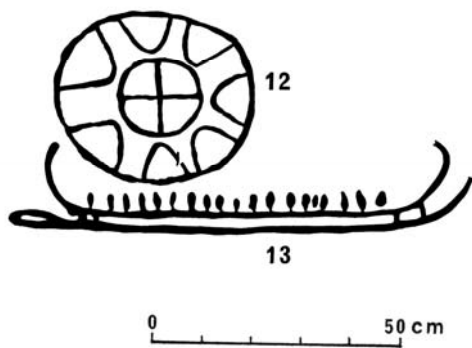


Haustveit A, right part of the panel (Mandt Larsen 1972, pl 50)

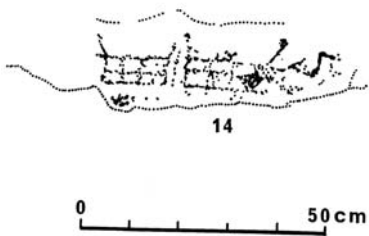


Haustveit A, left side of the panel (Mandt Larsen 1972, pl 51)

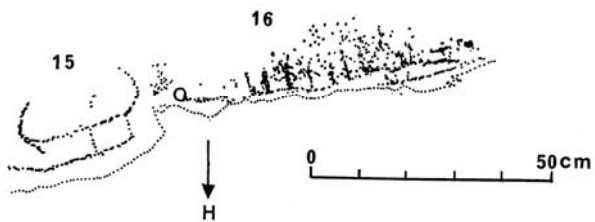
PLATE 20



Haustveit B (Mandt Larsen 1972, pl 52a)

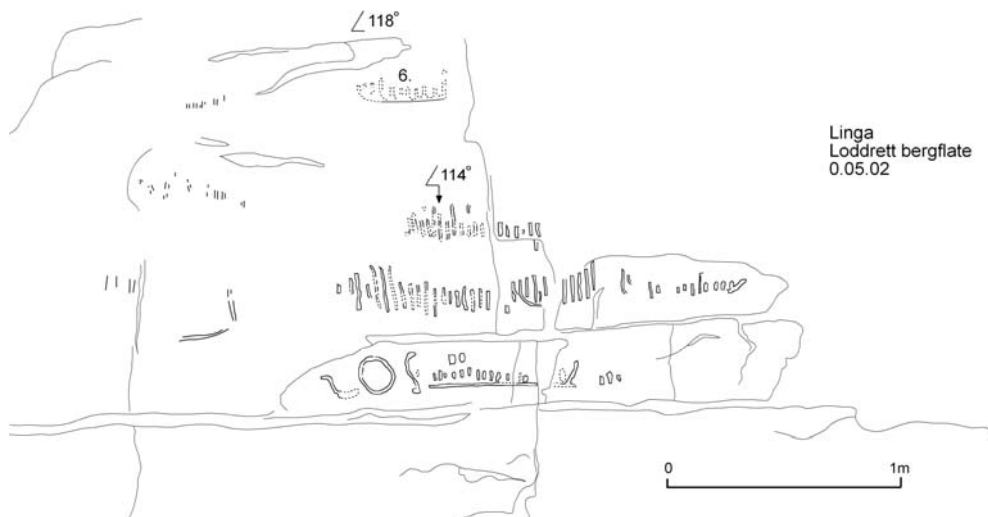


Haustveit C (Mandt Larsen 1972, pl 52b)

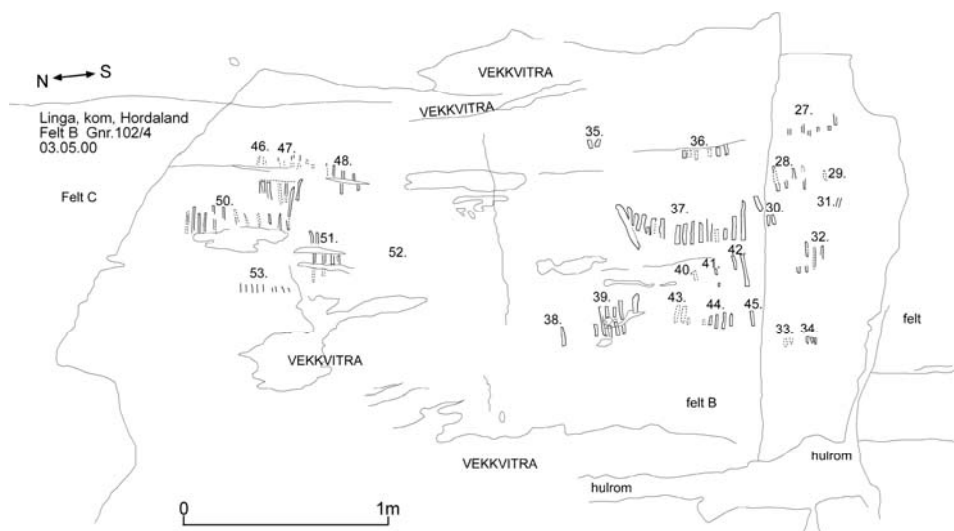


Haustveit D (Mandt Larsen 1972, pl 53a)

PLATE 21

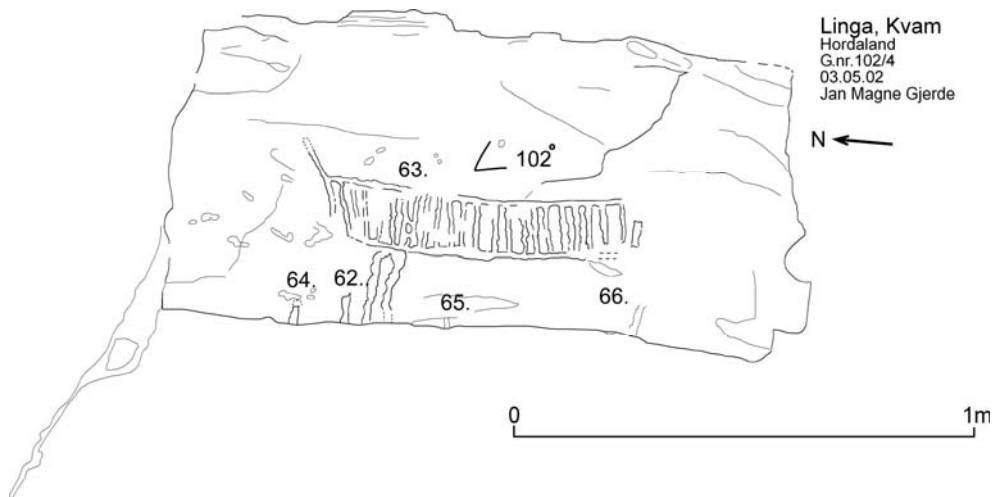


Linga 1, part A. © Bergen Museum

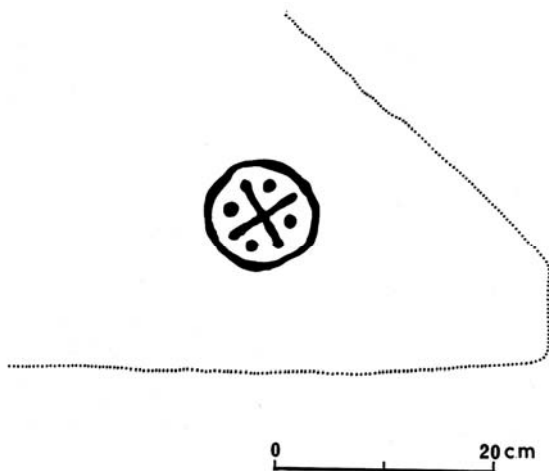


Linga 1, part B. © Bergen Museum

PLATE 22

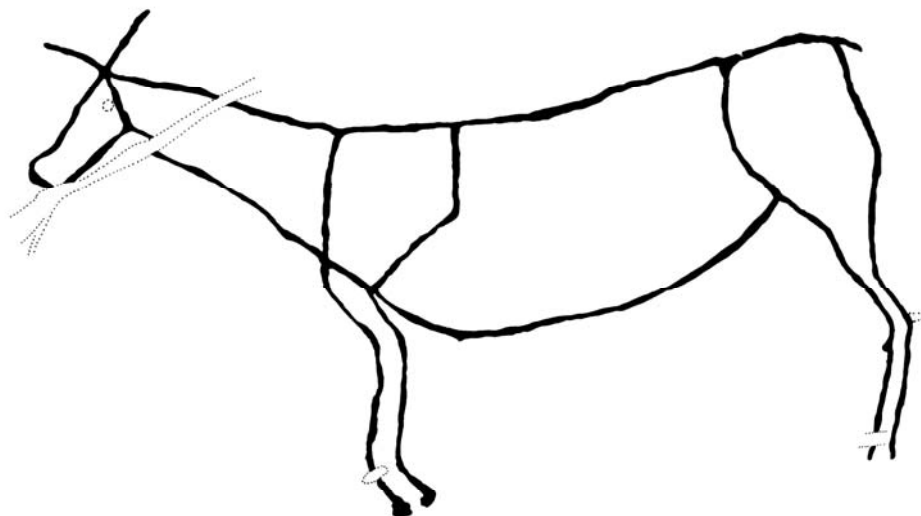


Linga 1, part D. © Bergen Museum

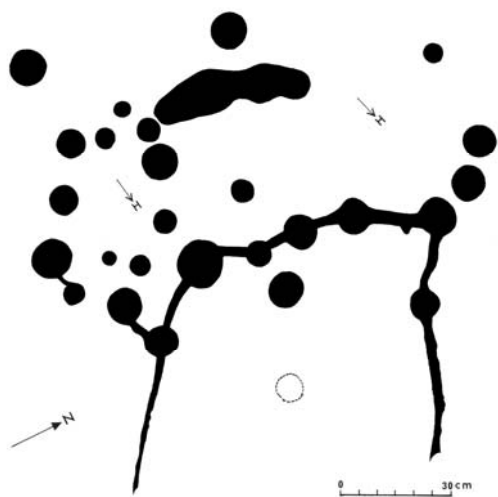


Opheim (Mandt Larsen 1972, pl 40b)

PLATE 23



Rykkje 1 (Mandt Larsen 1972, pl 35)



Sandstå 1 (Mandt Larsen 1972, pl 55b)

PLATE 24



Sekske 3 (Mandt Larsen 1972, pl 55a)

Overleaf: Plate 25: Støle part 1 (after Vevatne 1996, pl 5)

PLATE 25



PLATE 26

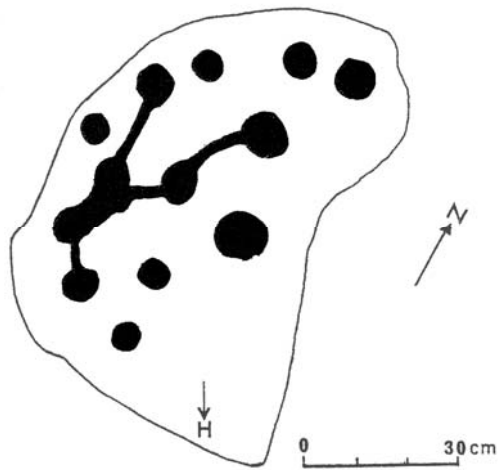


Støle, part 2 (Gjerde 2000, figure 7.145)

PLATE 27

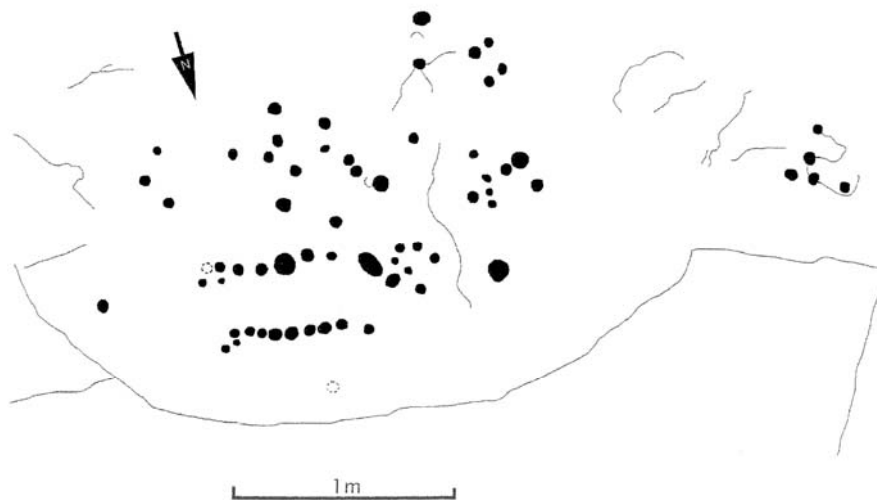


Svolland 1 (Mandt Larsen 1972, pl 29b)

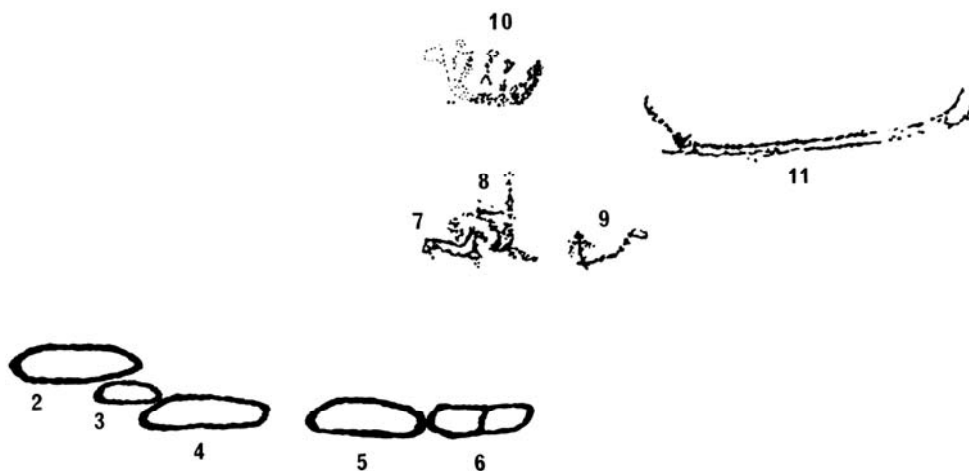


Tesdal 2 (Mandt Larsen 1972, pl 16a)

PLATE 28

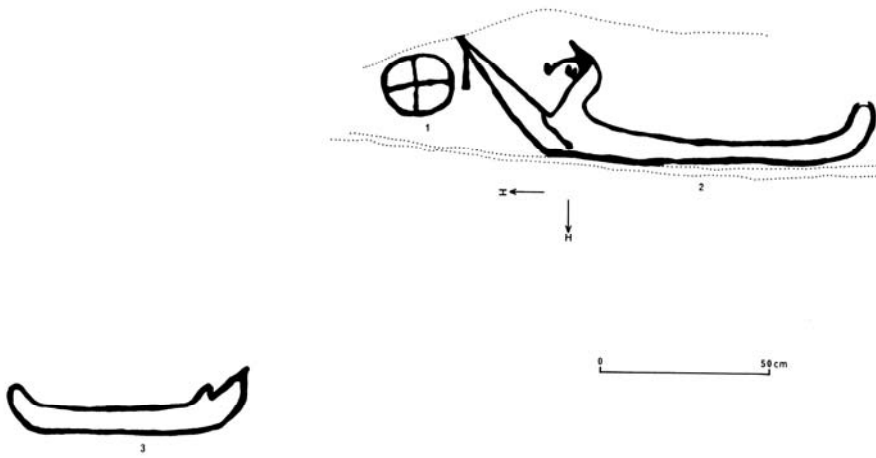


Tveito 1 (Gjerde 2000, figure 7.149)

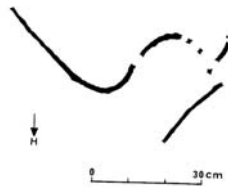


Ullshelleren rock shelter (Mandt Larsen 1972, pl 43). One footprint is not included.

PLATE 29



Utbjoa 1 (Mandt Larsen 1972, pl 26a)



Utbjoa 2 (Mandt Larsen 1972, pl 26b)

PLATE 30

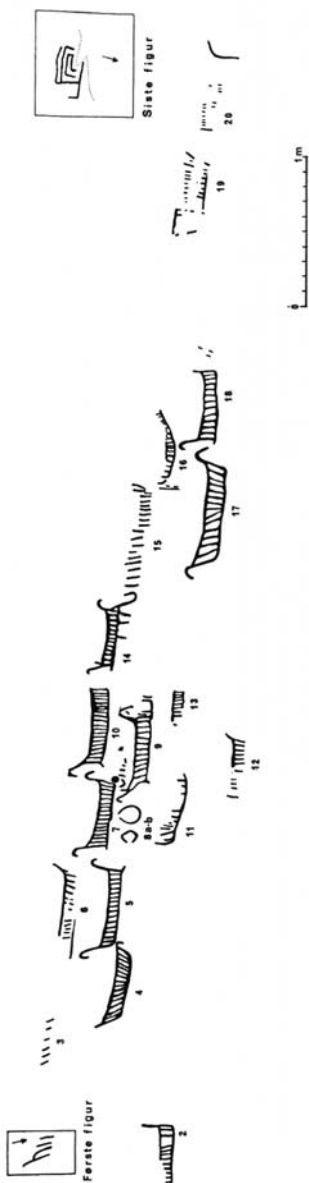


Utboja 3 (Mandt Larsen 1972, pl 27)



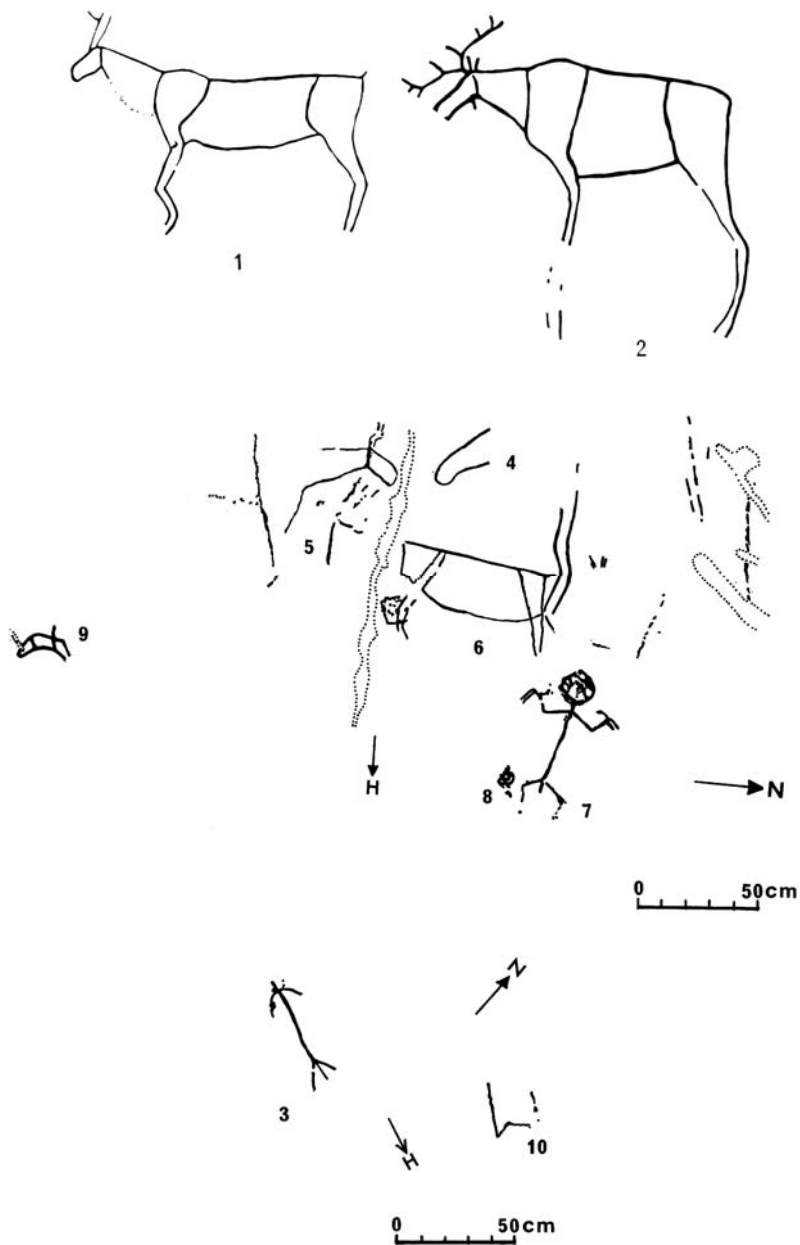
Utboja 4 (Mandt Larsen 1972, pl 29a)

PLATE 31



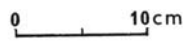
Vangdal 1 (Mandt Larsen 1972, pl 37)

PLATE 32



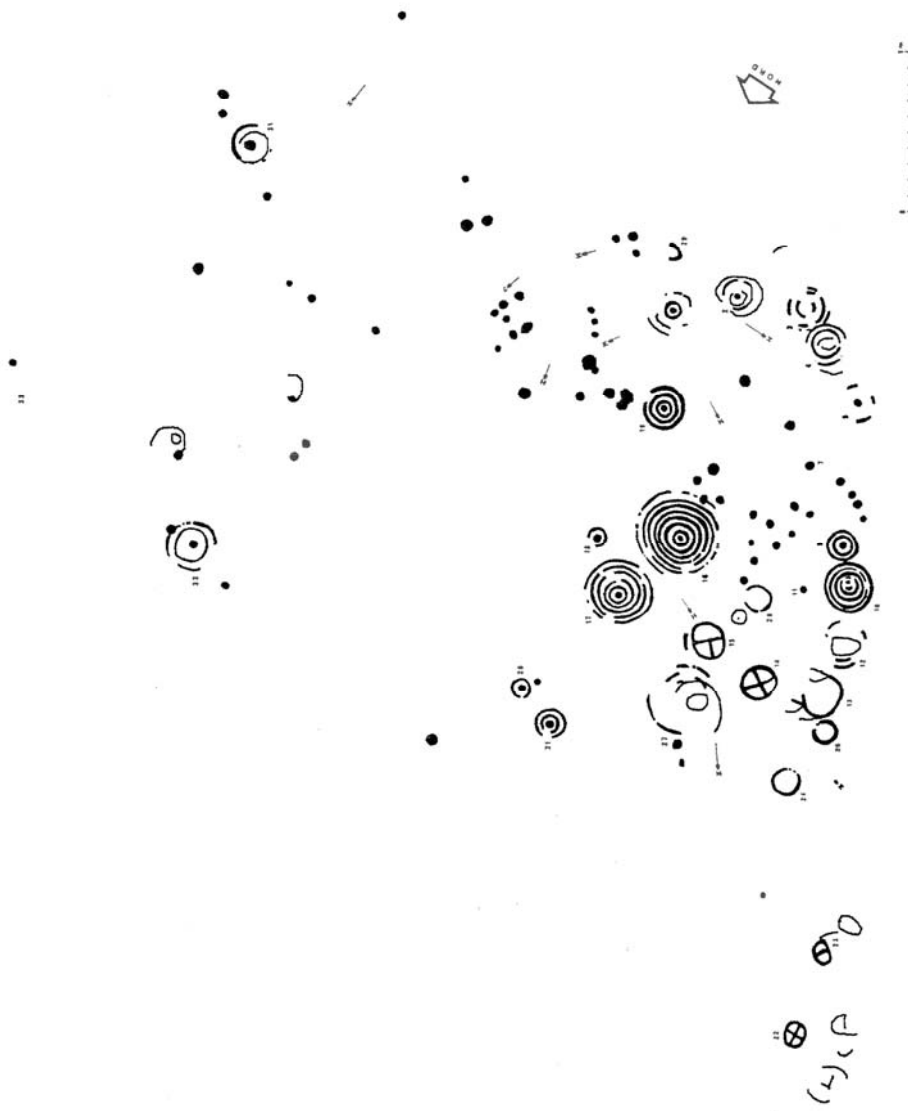
Vangdal 2 (Mandt Larsen 1972, pl 38a (top), pl 38b (centre), pl 39a (bottom)).

PLATE 33



Vik 1, part A (Mandt Larsen 1972, pl 39b)

PLATE 34



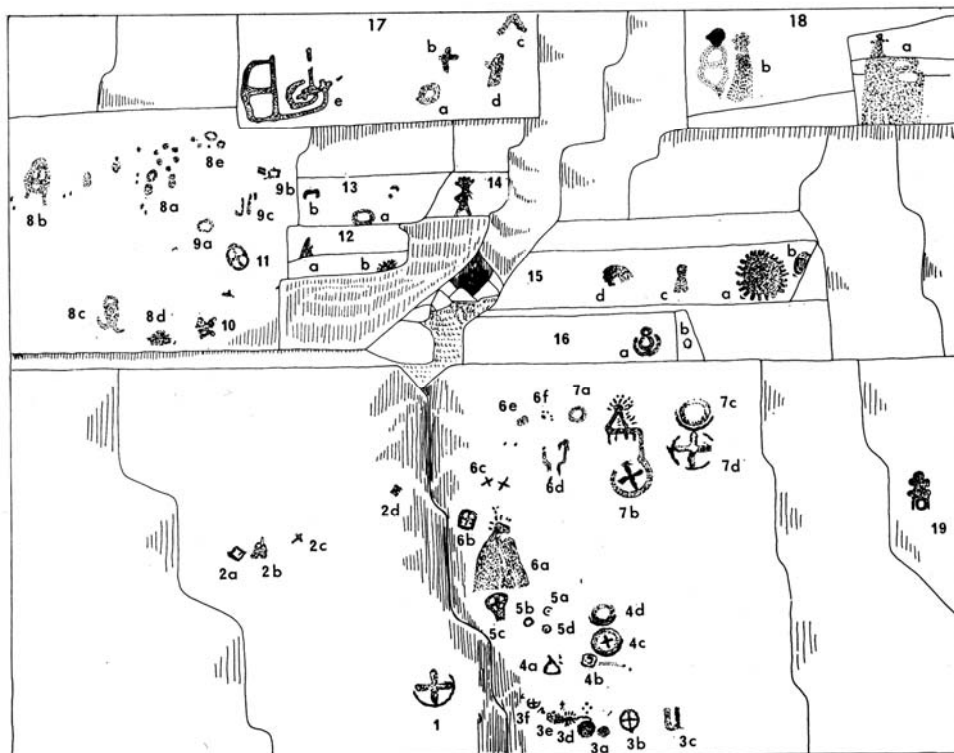
Vinje 1, with new figures (Gjerde 2000, figure 7.150)

PLATE 35



Vinje 3 (Mandt Larsen 1972, pl 19a)

PLATE 36



Årsand (Mandt Larsen 1972, pl 23)

