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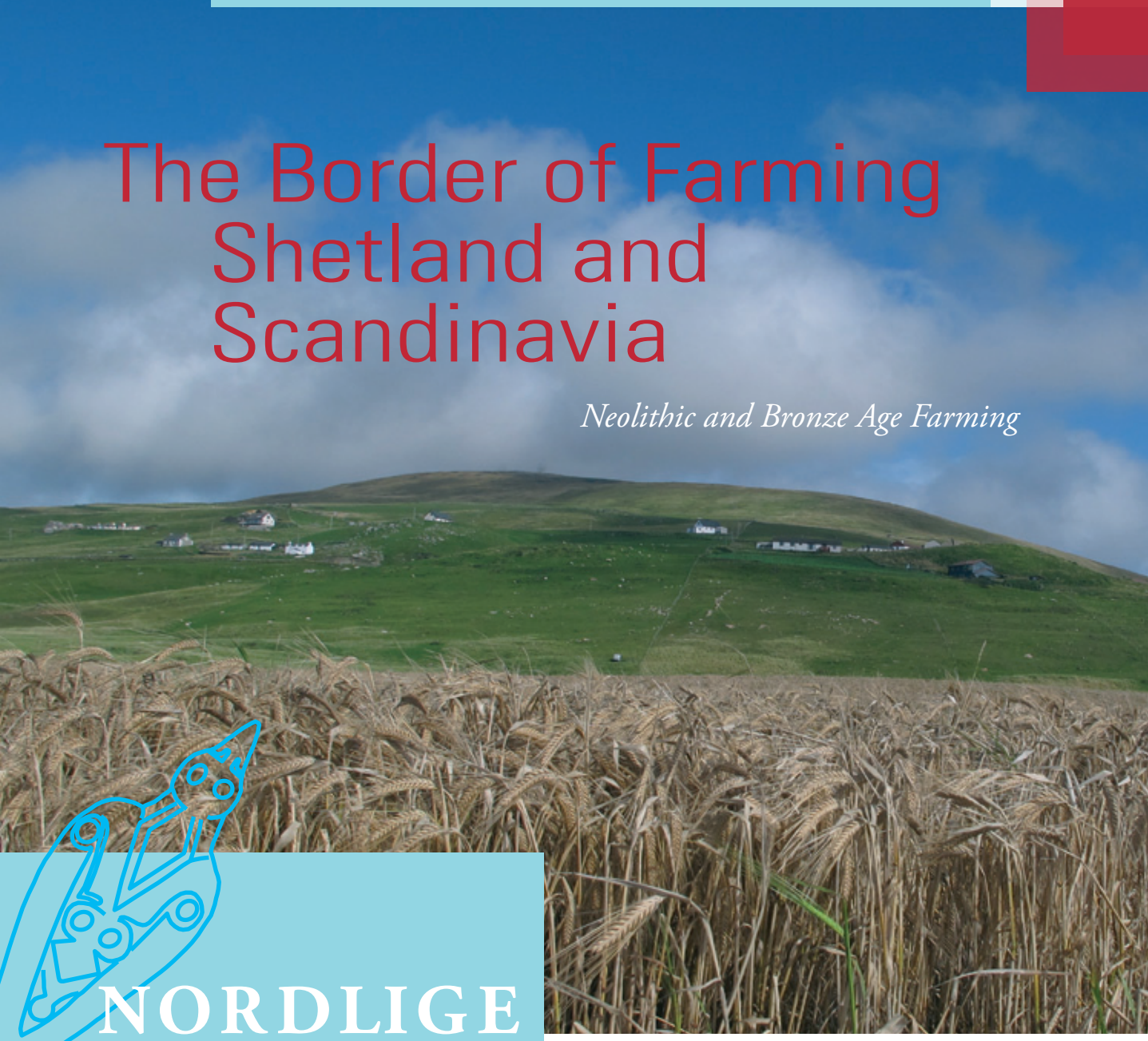
The Border of Farming Shetland and Scandinavia

Neolithic and Bronze Age Farming



NORDLIGE VERDENER

Papers from the symposium in Copenhagen September 19th to the 21st 2012

Edited by Ditlev L. Mahler
Northern Worlds
The National Museum of Denmark

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Barley field, Scousburgh, South Mainland, Shetland. Photo by Ditlev L. Mahler September 2011

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Contents

At the museum Færgegården. From the excursion during the symposium. Photo D. L. Mahler 2012.

The empirical basis for research on farming settlements in northern Norway 1200 BC – 0

Johan E. Arntzen

The warm Gulf Stream makes northern Norway milder than the latitude would otherwise suggest. Even though the winters are dark and long, agriculture and livestock husbandry is possible along large parts of the thin coastline. Northern Norway also marks the northernmost extension of the Nordic Bronze Age complex.

Introduction

Both archaeological and botanical data suggest that the period 1200 BC – 0 marks the definitive adoption of agriculture and husbandry at least up to the Lyngen area in northern Troms (e. g. Johansen and Vorren 1986, Johansen 1990, Sjögren and Arntzen 2013). If one follows M. Zvelebil's model of the gradual adoption of farming among hunter-fisher-gatherer societies, this time period both encompasses the end of the "substitution phase" as well as the entirety of the "consolidation phase" (Zvelebil 1986).

The primary aim of this paper will be to re-evaluate a number of sites along the northern Norwegian coastline where asbestos tempered ceramics and thin-walled soapstone vessels have been found. Linking these finds to recently excavated settlement sites with house structures, cooking pits and ancient fields, it is argued that the asbestos tempered ceramics and thin-walled soapstone vessels sites represent the key to understanding the geographical extent as well as the significance and cultural affiliation of the early farming communities of the region. Engeløya, which is an island with a particular concentration of Nordic Bronze Age finds, will also be briefly presented.

Date (approximately)	Agrarian activity	Period	Agrarian development
AD 800-1050	●●●●	Viking Age	Expansion
AD 550-800	●●	Merovingian Period	Abandonment
AD 400-550	●●●●	Migration Period	Expansion
AD 150-400	●●●	Late Roman Iron Age	
100 BC - AD 150	●	Late PRIA / Early RIA	Abandonment
300-100 BC	●●○	Late Pre-Roman Iron Age	
600-300 BC	●●	Early Pre-Roman Iron Age	Expansion
1000-600 BC	●	Late Bronze Age	
2300-1000 BC	○	Late Neolithic / Early Bronze Age	Expansion?

Fig. 1: Agricultural expansion and abandonment phases in North Norway during the Bronze- and Iron Age (Sjögren and Arntzen 2013: Table 5, freely based on palynological studies, i.e. Vorren and Alm 1985; Johansen and Vorren 1986; Nilssen 1988; Vorren et al. 1990; Vorren 2005, 2009; Sjögren 2009). Relative agrarian activity is: ○ uncertain; • low; •• moderate; ••• high; •••• very high.

Palaeobotanical studies

From the early 1970s onwards a considerable number of palynological investigations from lakes and mires have played an important role in the research on early north Norwegian agriculture. The most prominent researcher in this area has been the botanist Karl-Dag Vorren, who through several years had a fruitful co-operation with archaeologist Olav-Sverre Johansen (e. g. Johansen and Vorren 1986). Fig 1 shows a summary of the main trends summarized from a number of these studies. The first clear expansion phase can be documented at c 1000 BC with a following phase at c 600 BC. A third and possibly more intense expansion appears between c 300 – 100 BC. With the exception of the recently excavated Kveøy site, archaeobotanical, osteological and macrobotanical evidence is scarce and without a reliable context within the region (e. g. Sjögren and Arntzen 2013:2, Fig. 2, Arntzen in press).

Stray finds and rock art indicating the presence of agricultural settlements

Bronzes or moulds of Nordic Bronze Age type have been found at 15 sites in the region (fig. 2). With the exception of one fragment of a soapstone mould for a Bronze Age per. V-VI celt from Sandvika in Tromsø municipality, all of the finds are located from the southern Troms region and southwards. Although the exact de-

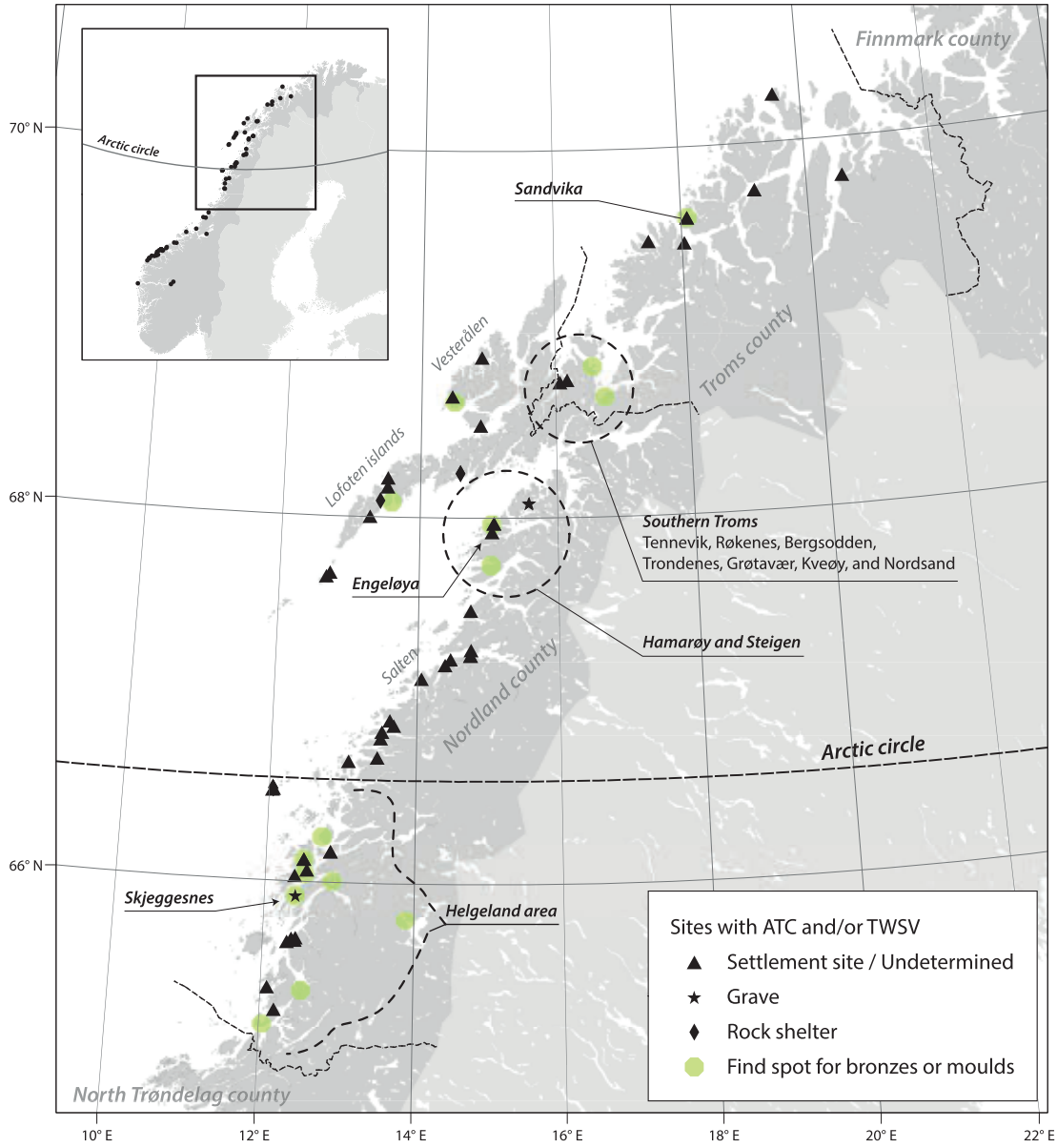

Fig 2: Map of northern Norway showing the distribution of asbestos tempered ceramics and thin-walled soapstone vessels sites along with find spots for bronzes or moulds. Important regions and place names that are mentioned in the text are marked on the map. The upper left overview also shows the distribution of asbestos tempered ceramics sites in middle and western Norway. Data from northern Norway is based on Jørgensen and Olsen 1988, Andreassen 2002, Valen 2007 and own studies. Data from middle and western Norway is based on Ågotnes 1986.

tails surrounding the find context for most of these objects are limited, as many as 12 of the localities can be interpreted as votive finds. Two other finds stem from graves, while the above mentioned mould is the only one that can be directly linked to a settlement site.

A total of 19 sites with artifacts of late Bronze Age type ceremonial stone axes should also be mentioned. The northernmost is located at Tana in Finnmark at over 70° latitude (cf. Marstrander 1983). The common denominator of this group of objects is unfortunately that they all lack a reliable context.

Bronze Age type rock art is found at 12 sites in northern Norway (Valen 2007). With the exception of the two northernmost examples, Kåfjorden and Apana Gård in Alta, all the sites north of the Arctic Circle consist of very few individual depictions. With the exception of the cup mark stone in Steigen municipality, which will be discussed later in this paper, none of the sites north of the Helgeland district can be directly linked to documented agrarian settlements. The neighboring Tro and Flatøy localities within Alstahaug municipality, well south of the Arctic Circle, are as such the northernmost rock art localities that truly mirror those further south in Scandinavia (e. g. Sognnes 1989).

The advent of mechanical top-soil stripping

With the introduction of mechanical top-soil stripping as a method of both archaeological excavation and survey in the early 1980s, 20 years after the method was established further south in Scandinavia, the empirical basis of the study of early farming settlements in Norway has been greatly increased (e. g. Løken et al. 1996). This excavation method was first adopted in western and southwestern Norway inspired by the methods used in South Scandinavia and on the Continent. In northern Norway, however, the first full-scale mechanical top-soil stripping excavation did not take place until 2008 at Kveøy in southern Troms (Arntzen and Sommerseth 2010). Trial trenching as a method of field surveying has however been in use by the county archaeologists of Nordland and Troms since the early 2000s. Following the organization of cultural heritage management in Norway, the county archaeologists are responsible for doing surveys prior to full scale excavation, which in turn are the responsibility of the regional museums. Quite often small scale surveys resulting in finds with great research relevance do not lead to full scale excavations. Survey reports from the counties often end up hidden in an institutional archive as there are no routines for disseminating them amongst scholars. As a considerable number of surveys done

by trial trenching have brought forward remains of prehistoric agricultural settlements, re-evaluating these lesser known sites is an important step to understand the development of early farming in the region further.

Results from recent excavations and surveys

In the following a few relevant excavations and surveys from recent years will be briefly summarized. This is in no way a complete review, but the following sites might provide some insight as to what can be expected when mechanical topsoil excavations are conducted within the North Norwegian farming landscape.

The shortest summary possible concerning the Kveøy excavations is that the results in many respects mirror sites from southwestern and western Norway. Remains of fossile field-layers were documented from the transition between early to late Bronze Age c 1200 BC, and from the late Bronze Age both a three-aisled longhouse and remains of a possible slash-and-burn field were uncovered dated to c 900 – 700 BC. Archaeobotanical investigations, both macrofossils and pollen, show that the crop production during the Pre-Roman Iron Age was more diverse and intense than during the Bronze Age. At Kveøy both a longhouse over 20 meters in length, a utility building of some sort, and several graves dated to c 300 BC were documented. The remains of fossil arable field of a completely different character than the Bronze Age field were also documented (Sjögren and Arntzen 2013, Arntzen in press).

Nearby the Kveøy site, several county surveys where trial trenching has been used demonstrate that these types of settlement remains are not unique for the region. The Nordsand site, located on an island nearby the city of Harstad, revealed a cooking pit dated to c 1200 BC along with ard marks and possibly also traces of post-holes and fossil field-layers that can be contextually linked to the same phase of settlement (Bunse 2012). The results from this survey are difficult to interpret because the site is located within a drift-sand area. A smaller excavation of a farm mound at Bergsodden in the same region also yielded a cooking pit dated to c 1000 BC (Olsen 2012). ^{14}C-dates from the Bronze Age are however rare throughout the region. Sites dated to the Pre Roman Iron Age are on the other hand the rule rather than the exception as results from trial trenching surveys. At Berg nearby Kveøy both cooking pits and field-layers dated to the Pre Roman Iron Age have been documented. Similarly Pre Roman Iron Age field-layers have also been documented at the Røkenes farm, just outside of Harstad. Further south, throughout the County of Nordland, many surveys have yielded the

same type of results. These include massive fossil Pre Roman Iron Age field-layers and ard marks that have been documented at Morfjorden in the Vesterålen area (Bjørkli 2009). ^{14}C-dates to the Bronze Age however, are so far lacking outside of the southern Troms region.

Summing up these results, it is important to highlight the dubious representativity they provide when assessed outside of the context of other data categories. What is reflected is obviously the geographical location of recent economical investments in the region, including everything from the building of new roads, housing projects and not the real distribution of prehistoric agricultural settlements. It is however clear that Pre Roman Iron Age agricultural settlements can be expected all along the coast, at least from the South Troms area and southwards. The Bronze Age settlements are of a somewhat different character than the Pre Roman Iron Age settlements, possibly including a completely different approach to manuring practices and field cultivation, and as such might be harder to document through trial trenching.

Sites with asbestos ceramics and soapstone vessels

Asbestos tempered ceramics have for many years been discussed as a possible link between the northern border of farming and the Nordic Bronze Age complex (cf. Munch 1962, Bakka 1976: 29-38, Jørgensen 1986, Ågotnes 1986, Jørgensen and Olsen 1988, Andreassen 2002). It is important to note that ceramics with asbestos tempering are found within the context of hunter-fisher-gatherer societies in northern Fennoscandia from around 2000 BC and being present until the first centuries AD (e. g. Carpelan 1979, Jørgensen and Olsen 1988). Within this complex technological tradition only one particular type seems to be linked to agricultural settlements. In northern Norway this variety is referred to as "Risvik ceramics", named after a site in the Helgeland area, while a very similar variety appearing within the same types of contexts in middle and western Norway simply is referred to as "asbestos ceramics". It should be pointed out that the typology most certainly can be debated and that the internal variation is considerable (Ågotnes 1986:108-114, Andreassen 2002: 50-62). Such a discussion is nevertheless outside the scope of this paper, and both the northern and southern type will in the following be referred to as asbestos tempered ceramics.

Another find category that shares many of the contextual qualities of the asbestos tempered ceramics is the thin-walled soapstone vessels. This type is clearly discernible from later medieval types, and can in general be dated to the late Bronze Age and the Pre Roman Iron Age. Contex-

tually this particular kind of soapstone vessel also has a tendency to appear at the same sites as the asbestos tempered ceramics (Møllerup 1960; Pilø 1989).

Contexts

At present 40 different sites with asbestos tempered ceramics and 20 sites with thin-walled soapstone vessels are known within northern Norway, fig. 2. On eight of these sites both categories of finds have appeared together. When it comes to the asbestos tempered ceramics especially one grave find is of special importance when it comes to a possible affiliation with Nordic Bronze Age. A professionally excavated burial mound of 20 meters in diameter at Skjeggesnes in Alstahaug municipality, contained the remains of two persons, as well as asbestos tempered ceramics, a razor with a horse head handle and a bronze pin that probably should be dated to Bronze Age per. III (Bakka 1976:26). The only other grave find with both asbestos tempered ceramics and dateable Nordic bronzes is from Røkke in North Trøndelag and can most likely be dated to Bronze Age per. II (Bakka 1976:30-31). In addition to these graves there are at least four burials south of Nordland, where asbestos tempered ceramics have been found and the burial customs clearly indicate Nordic Bronze Age. One burial of this type is also known from northern Norway. A cairn with a stone cist that was excavated in the late 1960s at Uteid in Hamarøy municipality contained nothing but a few shards of asbestos tempered ceramics (Helskog 1967).

Anne Ågotnes (1986) noted in her review of the asbestos tempered ceramics from middle and western Norway that the finds have a clear connection to agriculture. Out of her 30 sites, of which five overlap with the present study, thin-walled soapstone vessels were present at 12 and ard marks were found at four. In addition to this she noted that the sites in general were located near arable sandy soils, and that Bronze Age burials were in close proximity throughout her research area (Ågotnes 1986:115f).

The results from surveys and excavations that have taken place the recent years clearly indicate that also the northern Norwegian sites can be directly linked to agricultural settlements. Of the northernmost sites this includes Kveøy where asbestos tempered ceramics were found in two post-holes belonging to the largest Pre Roman Iron Age longhouse. Just a few kilometers away, at Hemmestad, exavations of an early iron smelting site, possibly dated as far back as 600 BC has also revealed asbestos tempered ceramics (Jørgensen 2011:99-107). Although a very limited excavation area, the presence of several cooking pits supports an interpretation as a settlement site. During a similarly small scale excavation in the

Vesterålen area, just south of southern Troms, asbestos tempered ceramics have been found in context with cooking pits, post-holes and ard marks, although it should be noted that no ^{14}C-dates exist (Schanche 1990). At the Skålbunes site, further south in the Salten area, asbestos tempered ceramics were uncovered in the wall ditch of a Pre Roman Iron Age house and in relation to both a fossile field and cooking pits (Arntzen in press). Close to Skålbunes, in connection with a survey at Ilstad, asbestos tempered ceramics were found in an area with cooking pits and post-holes dated to the late Pre Roman Iron Age (Johansen 2002). Also at Nordtun in Meløy municipality asbestos tempered ceramics have been uncovered in an area with post-holes, ard marks and cooking pits (Herstad 2009). No ^{14}C-dates exist for this site, but the presence of a flint scraper might indicate Bronze Age.

In addition to these seven sites, the context for nine finds can be described as "drift-sand areas with fireplaces". The same description is also given for 12 of the 30 southern sites (Ågotnes 1986:106). The asbestos tempered ceramics and thin-walled soapstone vessels from most of these sites have come to light from amateurs. The nature of drift-sand areas is obviously that the local topography changes rapidly. The shifting sand also complicates sites with multiple period settlements. The observation of fireplaces that very often follows the amateur's description of the drift-sand sites is probably significant in their interpretation. It should also be noted that the discrimination between cooking pits and fireplaces can be difficult for professionally trained archaeologists, and probably even more so for amateurs.

During field work in the summer of 2012, I visited a number of the drift sand areas in Nordland that hadn't been subject to professional excavation. When it comes to landscape, the striking common denominator for most of these sites was indeed their location within areas nicely suited for agriculture. One such site at Fjære in Bodø municipality, was located in the middle of a present day grass field. Although the area was quite disturbed following the modern clearance of the fields, two test pits were dug. No finds were uncovered, but charcoal particles were evenly distributed within the sandy subsoil, possibly indicating prehistoric cultivation. Just south of the city of Bodø two similar sites were visited, Seivåg and Seines located on the island Straumøya, both with a striking location on the best arable land within an otherwise swampy area.

Engeløya in Steigen – A focal site during the Bronze Age?

Engeløya in Steigen municipality is particularly interesting when discussing the

Fig. 3: Tracing of the cup mark stone at Sandvågmoen.

Bronze Age settlements in northern Norway. The island, which has an area of c 70 km^2, represents one of the densest and richest find areas for early to late Iron Age graves and settlements north of the Arctic Circle (Moltu 1988). The local climate is mild for the region; in fact the world's northernmost hazel forest is located on the southern side of the island. Of all the find categories that so far have been mentioned concerning early agricultural settlements, bronzes, rock art, asbestos tempered ceramics and thin-walled soapstone vessels are all present at Engeløya. The only thing that is missing from the equation is a complete settlement site.

The cup mark stone, located at Sandvågmoen at the outskirts of a present day infield on the southern side of the island, is clearly within the Nordic Bronze Age tradition. The boulder itself has a completely flat surface and measures c. 3,8 x 4,6 meters (fig. 3). The 16 cup marks that are carved into the surface vary from six to four centimeters in diameter, while their depth ranges from c. two to half a centimeter.

In the Bø area on the northern side of the island we find the rest of the sites that can be linked to Bronze Age agricultural settlements. This includes the only certain burial mound with Nordic bronzes north of Skjeggesnes. The finds came to light by the hands of a farmer in 1903 while he was excavating a cairn that previously had been converted into a potato cellar (fig. 4). The find consists of some undecorated tweezers as well as a double stud probably belonging to Bronze Age per. IV (Engedal 2010:47, 49). Another grave that possibly can be dated to the Bronze Age is a monumental ridge placed cairn of 20 meters in diameter, located strategically at Grådusan on a height with outlook towards the Lofoten Islands in the west (fig 5.). The cairn has never been excavated, and was somewhat damaged in the top when turned

Fig. 4: Above: Photo showing the view from the now removed Bronze Age burial cairn at Bø. The drift sand area at Bøsanden is located behind the red barn, just below the mountain. J. E. Arntzen photo. Below: Photo dating to the early 1900s showing the location of the Bronze Age cairn / potato cellar. It can be seen left of the white building in the middle of the photo. Courtesy of Rolf Lossius.

into a machine gun post during the Second World War. Its proximity to other Bronze Age finds as well as its general resemblance to middle and western Norwegian Bronze Age burial customs nevertheless suggests that the cairn could be of Bronze Age origin.

The most interesting site when it comes to actual settlement remains is the Bøsanden drift-sand locality situated near the seashore north of the above mentioned burials. Here both asbestos tempered ceramics and thin-walled soapstone vessels have been found, as well as large amounts of fireplaces, or perhaps more likely cooking pits. During the summer of 2012 I visited this locality to try to establish whether it could be possible to document intact cultural layers or not. Unfortunately the results were negative, as the area in recent years has been completely lacking turf cover. The

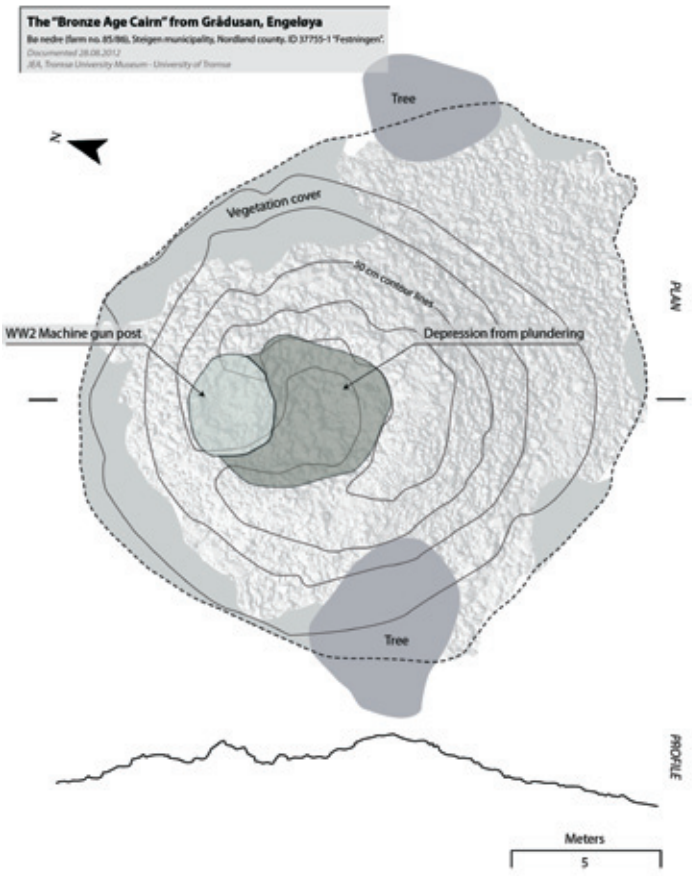

Fig. 5: Plan and profile drawing of the ridge placed cairn at Grådusan.

local topography was therefore totally transformed since the last observations of fireplaces were done in the 1980s. Nevertheless it seems clear that this site represents a settlement site that can be linked to Bronze Age and Pre Roman Iron Age agriculture. As an anecdote it should be mentioned that during the field survey a local farmer, Thor Holand, took me to see his ripening barley field, located just above the Bøsanden locality. The weather of this summer was terrible with above average rainfall and far below average temperatures. Nevertheless, during my visit in the end of august the barley seemed to do far better than the other crops.

Conclusions

When seen in connection with the recent results from excavations and surveys it is clear that the asbestos tempered ceramics and thin-walled soapstone vessels sites in many cases should be interpreted as indicating agricultural settlements. However, many nuances concerning these localities have been left out in this paper. There is a definite variation between how the sites are located throughout the region, and without further investigations it is difficult to assess to how large a degree these settlements truly mirror southern Bronze Age and Early Iron Age settlements. Another factor that has not been discussed is the presence of both slate artifacts and ceramic types linked to northern and eastern hunter-fisher-gatherer societies at several of the sites. The present study must merely be understood as a preliminary overview as to what kind of empirical basis actually exists for investigating these early agricultural settlements further. It is clearly possible to get beyond the stray finds and their limited context.

The next step in this research will be to excavate one of the most marginal asbestos tempered ceramics and thin-walled

soapstone vessels site within the study area, namely the Sandvika site in Tromsø municipality (Arntzen 2013). This site includes, in addition to finds of asbestos tempered ceramics and thin-walled soapstone vessels, a fragment of a mould for a Nordic Bronze Age celt as well as at least one fireplace. It is located within a marginal area for agriculture, but pollen analysis confirms that arable fields were present in the area during the late Bronze Age.

Compared to areas such as Engeløya, which might be considered to be more closely connected to the Nordic Bronze Age tradition than the northernmost sites, it must be expected that the marginal localities have closer ties to hunter-fisher-gatherer societies to the north and east.

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