MONOGRAPHS OF THE ARCHAEOLOGICAL SOCIETY OF FINLAND

Currents of Saami pasts

Recent advances in Saami archaeology

Marte Spangen, Anna-Kaisa Salmi, Tiina Äikäs & Markus Fjellström (editors)

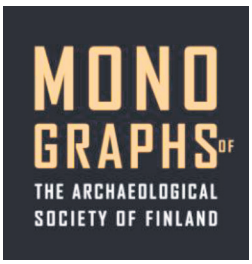
MONOGRAPHS OF THE ARCHAEOLOGICAL SOCIETY OF FINLAND 9

Published by the Archaeological Society of Finland www.sarks.fi
Layout: Elise Liikala
Cover image: Hilde Amundsen, NIKU

ISBN 978-952-68453-7-1 (online - PDF)
Monographs of the Archaeological Society of Finland ISSN-L 1799-8611

Currents of Saami pasts

Recent advances in Saami archaeology



MONOGRAPHS OF THE ARCHAEOLOGICAL SOCIETY OF FINLAND 9

MONOGRAPHS OF THE ARCHAEOLOGICAL SOCIETY OF FINLAND

Currents of Saami pasts
Recent advances in Saami archaeology

Marte Spangen, Anna-Kaisa Salmi, Tiina Äikäs & Markus Fjellström (editors)

Table of content

Introduction: Currents of Saami pasts

Marte Spangen[1], Anna-Kaisa Salmi[2], Tiina Äikäs[3], and Markus Fjellström[4]

> *…you return to a world of many determinations, where the attempts to explain and understand are open and never ending – because the historical reality to be explained has no known or determined end.* (Hall 2007: 278)

Saami archaeology and the study of Saami pasts

A scientific field is a constant process, and, as all processes, it is defined by dialectics, since standpoints are only defined in opposition to something else. Saami archaeology is no exception, and this field emerged precisely because of oppositions, when political conflicts enforced the realization of a lack of consideration of the Saami presence in the prevailing understanding of the past in northern Fennoscandia. Furthermore, the opposition to Saami archaeology and the identification of cultural heritage as specifically Saami has no doubt continued to shape the research within this field. Yet the field is neither ultimately defined by this genesis nor maintained without constant discussion and internal and external repositioning.

In our opinion, a certain measure of tension between different voices is a prerequisite to continue to shape any research field. This is inherent in studies of Saami archaeology, for several reasons. First, archaeology itself may be said to have a dual identity. It has the hallmarks of a defined scientific discipline in terms of a specific core object of study, specialized methodologies, and specific terminologies. At the same time, archaeology is incredibly diverse and may perhaps even be defined as transdisciplinary (see Hall 2007: 275–276), since we include practices and thoughts from so many other presumed delimited disciplines. Saami archaeology is perhaps a particularly transdisciplinary field, as it has always made use of a broad basis of sources. This includes all the sources used in archaeology in general, but perhaps particularly ethnography, though whether this has always advanced studies of Saami pasts, or sometimes limited them, is debatable (Wobst 1978; Schanche 1993; Olsen 2004: 28–29).

Secondly, Saami archaeology has its *raison d'être* in invoking previously unheard voices outside the research community, including new voices from the past but also of today (Äikäs and Salmi 2019). This has been an obvious goal for the research since its inception, at least in Norway partly parallel to and inspired by emerging feminist approaches in the 1970s and 1980s, as evident in the title of the seminal article by Audhild Schanche and Bjørnar Olsen. *Var de alle nordmenn?* ("Were they all Norwegians?"), playing on the title of an equally seminal feminist archaeology workshop *Were they all men?* (No.: *Var de alle menn?*) (Schanche and Olsen 1985; Olsen 1997: 70–71, 243; Battle-Baptiste 2017: 35). Approaches in Saami archaeology also concur in part with the more recently articulated

1. UiT- the Arctic University of Norway, marte.spangen@uit.no
2. University of Oulu, anna-kaisa.salmi@oulu.fi
3. University of Oulu, tiina.aikas@oulu.fi
4. University of Oulu/Stockholm University, markus.fjellstrom@oulu.fi

'community', 'public', and 'indigenous' archaeologies. These similarly aim to provide a voice for previously unheard stakeholders (Merriman 2004; Atalay 2006, 2012; Phillips and Allen 2010), whom are sometimes labelled 'subaltern' voices (Spivak 1988). Despite some critique of the ideological basis for and results of these frameworks, especially in terms of who is actually given a voice (González-Ruibal 2009, 2019; Spivak 2012: 5–6), such multivocality is generally pursued in indigenous contexts, which obviously includes collaboration with the indigenous communities. Saami archaeology has always emphasized ethnographic and traditional knowledge, and there has also been a consciousness about how local communities need to be active and conductive parts of research and preservation projects (Schanche 1993; Fossum and Norberg 2012; Barlindhaug 2013).

However, and thirdly, the focus on material objects in archaeology ensures a constant dialogue, where we can be, and often are, met with solidified counter-arguments to our preconception in every study, or what has been labelled the 'evidential constraint' (Wylie 1992). The lingering quality and materiality of these physical first-hand sources to long-term developments and events in Saami contexts outlive and resist both the longevity of human recollection and our penchant for categorization, arguably providing things with a voice of their own (see Olsen 2010). Thus, in the transdisciplinary field of the study of Saami pasts, archaeology is an indispensable producer of evidence for variations that are likely to stretch far beyond the stereotypes imposed by "the tyranny of the ethnographic record" (Wobst 1978; Olsen 2004: 28–29).

Finally, and fourthly, the fact that Saami archaeology inherently involves research efforts in four different countries, with four different majority languages and research traditions, results in a certain friction, in the best possible sense, that necessarily translates into a constant questioning of how to 'do this right'. Focus, theory, and methodology depend on the cultural historical context of the subject in different countries and the frameworks that articulate conceivable research questions and restraints in terms of, for instance, ethical considerations. This includes the extent to which it is ensured that Saami voices are heard in archaeological research projects. Ideally, more research should be published in the various Saami languages, too, though at least summaries in Saami languages have become more common (e.g., Spangen 2016; Fjellström 2020). As in this publication, however, translation is often limited due to financial considerations. This is a challenge because any text should be translated preferably into at least the five Saami languages commonly used today (North, South, Lule, Inari, and Skolt Saami), and preferably all the Saami languages to encourage the revitalization of those that are extinct or nearly extinct (Pite, Ume, Kildin, Akkala, and Ter Saami). The language issue underscores how Saami archaeology is also defined by the cultural diversity between and within Saami communities. One aspect of this is the efforts made today to increase knowledge about the less studied 'minorities in the minority'. Due to the sheer number of people living in North and Lule Saami-speaking areas today, the culture, history, and language of these groups are generally better known than those of other Saami groups. Our use of the spelling 'Saami' in this publication, in contrast to the North Saami spelling 'Sámi' used for the conference title, reflects a recognition that our research needs to be inclusive in this sense.

Despite these inherent multivocal qualities, Saami archaeology, like all scientific fields, is likely to congeal over time, as accepted and not so accepted research questions and approaches are sorted out. Hence, we also need to make a conscious effort to maintain the multitude of voices, both in terms of exploring new material, methods, and theories with an open mind, and in terms of literally recruiting new voices. In addition, in order for the said "frictions" to have any beneficial consequences, we have to continue to meet, discuss, and reposition within the existing international research community involved in this field.

Advances in Sámi Archaeology

This volume presents results from one such effort by a number of people who helped organize and participated in the conference *Advances in Sámi Archaeology* at Siida Sámi Museum in Inari, Finland, 4–6 June 2018. About 50 participants were present, listening to a total of 25 papers (samiarc.wordpress.com/program), which were also followed by a number of people through online streaming. This was an encouraging level of interest and number of researchers working on topics relevant for the understanding of Saami pasts and the meaning of this research for Saami communities today. It was equally refreshing to note the broad scope of research that is currently identified by investigators as Saami archaeology. The presentations covered a chronological span from the Iron Age to the present, including current use of Saami cultural heritage, and most of the geographical areas defined as *Sápmi* (in North Saami; Skolt Saami: *Sää'mjânnam;* Aanaar (Inari) Saami: *Säämi*; Julev (Lule) Saami: *Sábme;* South Saami: *Saepmie*), from the Skolt Saami in the northeast to the South Saami in the southwest (Figure 0.1). The discussed contexts covered burials, settlements, offering sites, mobility, hunting contexts, World War II remains, and the early modern city of Stockholm. The studies implemented and discussed theoretical issues and methodological approaches such as repatriation, colonialism, globalization, political and legal uses of Saami archaeology, and cross-disciplinary use of historical, ethnographic, and lexical sources, soil sampling, osteology, isotopes, and DNA analyses in combination with archaeological excavation, survey, and interpretation.

This confirms a continuous trend of researchers in the field conducting studies of important issues concerning Saami societies with innovative methods and theoretical frameworks, with a consciousness of how these issues are interrelated with developments in society far beyond core Saami areas. The broad scope should ensure renewal of the field itself but also underlines why Saami archaeology cannot be seen as a niche subject for the interested few but an integrated part of archaeology in general and particularly in the Nordic countries and northern Russia (see Hansen and Olsen 2014: 6–8).

The present collection of articles is not comprehensive of the presentations at the conference, mainly because some of these were already published or in the process of being published elsewhere (Äikäs and Spangen 2016; Jerand et al. 2016; Nordin 2017; Lidén et al. 2018; Piha 2018; Dury et al. 2018; Spangen and Fjellström 2018; Kirkinen et al. 2019; Harlin 2019; Fjellström et al. in prep.). The contributions in this book still cover the main trends in Saami archaeology. Some of the articles in this volume concern basic research that is needed to map the physical evidence of cultural variation among Saami groups, while others activate already recorded material in new ways. Yet others are concerned with how this is interpreted and understood by a wider public. All this is a necessary part of the further development of Saami archaeology to better our understanding of Saami pasts and its consequences in the present.

At the same time, the present articles mainly focus on persistent topics that have been and continue to be central to the understanding of Saami societies of the past. Despite their prevalence, these need to be constantly reconsidered according to new evidence, methodologies, and theories. This includes three particularly monumental issues; how, where, and when reindeer husbandry, pastoralism, and herding emerged; how the Saami have interrelated with non-Saami groups and to what effect; and how archaeology affects and is affected by the recent political history of the Saami. These debates have defined Saami archaeology, and they are still pivotal to understand past and present Saami societies.

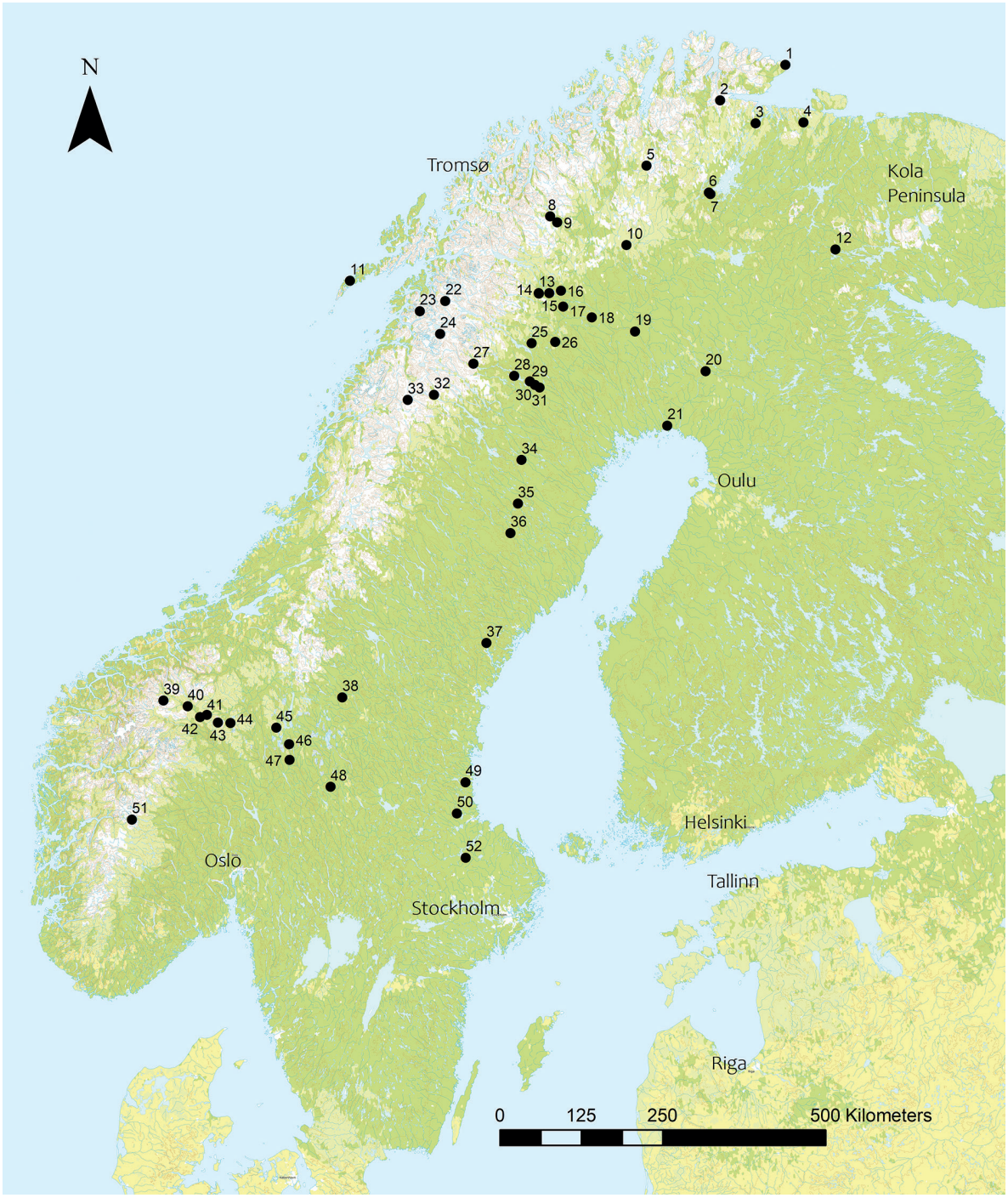


Figure 0.1: Map with place names mentioned in the book. 1. Vardø (Vardøhus), 2. Gollevárri, 3. Neiden /Njávdem, 4. Petsamo/Peäccam, 5. Beajalgŋai, 6. Inari/Aanaar, 7. Nukkumajokki, 8. Könkämä, 9. Rounala, 10. Enontekiö/Márkan, 11. Flakstad, 12. Liva, 13. Girjas, 14. Kiruna/Giron, 15. Jukkasjärvi/ Čohkkiras, 16. Pahtavaara, 17. Svappavaara, 18. Masugnbyn, 19. Kengis/Geavŋŋis, 20.Rovaniemi/Roavenjárga, 21. Tornio/Duortnus, 22. Suollagavallda, 23.Mørsvikbotn/Muorgos, 24. Lake Virihaure, 25. Unna Saiva, 26. Malmberget, 27. Kvikkjokk/Huhttán, 28. Lake Gállokjaure, 29. Tjäruborgares land, 30. Jokkmokk/ Jåhkåmåhkke, 31. Skällarim, 32. Silbojokk/Silbajåhkå, 33. Nasafjäll/Násavárre, 34. Arvidsjaur/Árviesjávrrie, 35. Gransjö, 36. Lycksele/Likssjuo, 37. Björned, 38. Härjedalen, 39. Reinheimen, 40. Lesja, 41. Einsethøe, 42. Dovre, 43. Rondane, 44. Gravskaret, 45. Vesle Sølenskaret, 46. Storhøa,47. Eltdalen, 48. Soejvengeelle's grave, 49. Järvsjön, 50. Medskog, 51. Sumtangen, 52. Tärnsjö (ill. M. Spangen).

Emergence of reindeer herding and pastoralism

A recurring topic in the present articles, and in Saami archaeology in general, is the question of when, where, and how the Saami became reindeer herders or pastoralists (e.g., Hultblad 1968; Arell 1977; Aronsson 1991; Mulk 1994; Storli 1996; Wallerström 2000; Hedman 2003; Bergman et al. 2008; Andersen 2011; Sommerseth 2011; Bergman et al. 2013; Bjørklund 2013; Hedman et al. 2015; Røed et al. 2018).

Besides discussions about terminology and the different ways of domesticating and keeping reindeer, of which reindeer herding is probably the best overall concept, this is a discussion about what historical and archaeological evidence can reveal about the topic. It is central to the understanding of Saami cultural history because of the stereotypical, though not entirely accurate, association of Saami groups and individuals with reindeer and reindeer nomadism. However, the genesis of Saami reindeer herding is also of crucial importance to understand the composition of Saami societies, their habitation and mobility patterns, land use, territorial divisions, economic and cultural life-worlds, and relation to neighbouring groups. Despite having been discussed for decades, it is clearly a valid and, in many ways, unresolved research question.

We have a relatively good understanding of the general course of events: the gradual emergence of domesticated reindeer, perhaps for draught purposes, before the 15th century, and the intensification of reindeer herding associated with a range of societal changes after that (e.g., Bjørnstad et al. 2012; Bergman et al. 2013; Røed et al. 2018). Yet, many questions, such as the local variations of the process, the role of wild reindeer hunting in economy and worldview, and the details of the early reindeer herding practices, still remain open. It is interesting to see that researchers within Saami archaeology today approach this topic from a wide range of methodological frameworks and types of archaeological material. In this volume, Anna-Kaisa Salmi, Sirpa Niinimäki, and Hanna-Leena Puolakka report on an innovative comparative study of stress markers on reindeer skeletons, which enables mapping of the use of reindeer as draught animals and a new way of determining if reindeer in different contexts are wild or tame. Milton Nuñez and his co-authors report on the 2008–2011 Academy of Finland project, *Human-Animal Relations among Finland's Sámi 1000–1800 AD*. They produced a series of results, among them that the isotopic composition in reindeer bones at offering sites in Finland indicate a distinct change, most likely from wild to domesticated reindeer, around AD 1600. Jostein Bergstøl refers to recent aDNA studies of reindeer to discuss the development of reindeer herding in southern and northern Norway, respectively, while both he and Hilde Amundsen and Kristin Os discuss the connection between coral hunting facilities and later installations used in reindeer herding.

The wide range of possible archaeological approaches is all the more interesting and promising due to the lack of conclusive written sources for this topic. There is a long tradition in Saami archaeology of taking into account all the available sources that can inform the matter. However, there is debate as to whether continued discussions about the meaning and source value of, for instance, the famous 9th-century Ohthere's account or the 16th- and 17th-century Vardøhus fort records will help establish the phases of reindeer domestication in Saami contexts. Perhaps we need to concentrate even more on the potential of the archaeological material to determine these phases in various regions. There are still vast amounts of osteological and (landscape) archaeological evidence that could be investigated to provide additional, and possibly contradictory, answers about domestication processes in different parts of Sápmi than can the few and inconclusive historical sources available. Ongoing projects are currently studying osteological remains with these aspects in mind, such as the ERC and Academy of Finland funded *Domestication in Action – Tracing Archaeological Markers of Human-Animal Interaction* (e.g., Salmi et al. this volume) and the building of a database of isotope values from reindeer and other animals in northern Fennoscandia (Fjellström 2020). DNA research on reindeer populations has

also yielded important results (Røed et al. 2018). There is reason to think that these and other efforts in the years to come will extend our knowledge about this topic even further. Furthermore, these and other studies have challenged previous notions of the Iron Age and medieval Saami as mainly fisher-hunter-gatherers and/or reindeer herders. Not only are details of the multiple combinations of livelihoods in different areas being revealed, but new aspects are coming into focus. For instance, increasing evidence suggest that sheep husbandry was also part of the Saami economy in more areas and at an earlier stage than previously assumed (Hedman and Olsen 2009; Äikäs 2015; Hedman et al. 2015; Salmi et al. 2015; Spangen 2016; Salmi et al. 2018; Spangen and Fjellström 2018; Nuñez et al. this volume). This opens up another set of questions about Saami economy, landscape use, trade, and relationship to neighbouring (more definitely agricultural) groups.

The internal variation and contacts between Saami communities also continue to be explored. In this volume, Oddmund Andersen presents results from the study of an offering site and an adjacent scree grave in Mørsvikbotn, Nordland, northern Norway, an area where three different Saami groups were present and interacted, all of whom may have used the offering site. Gunilla Larsson, on the other hand, discusses the less studied Forest Saami, who were part of the local communities in middle Sweden until quite recently, and who had their own distinct economic adaptations and cultural expressions that can also be traced archaeologically. Both studies clearly illustrate the continued need for both more fieldwork and continuous attention to geographical and chronological variation to advance our understanding of the complexities of past Saami societies.

Saami archaeology about the non-Saami

As mentioned, another key aspect of Saami society studied by archaeologists is the contact between Saami and other groups. Such contacts were arguably instrumental in the genesis of Saami identity (Odner 1983; Hansen and Olsen 2014: 22–26). Notably, this contact also affected the neighbouring groups, for instance, in terms of how what has been labelled as a Germanic, or Norse, ethnicity was developed and articulated among groups in multicultural areas. A series of studies have highlighted the complexities of this relation and the limited usefulness of a dichotomist understanding, pointing to the hybrid cultural expressions in border zones and meeting places between the Saami and non-Saami (e.g., Olsen 2000a; Spangen 2005, 2009, 2010; Bruun 2007; Bergstøl 2008; Nurmi 2009; Olsen et al. 2011; Lehtola 2012; Gjerde 2016; Hakamäki 2016; Henriksen 2016; Salmi et al. 2018; Kylli et al. 2019).

The topic is present in this volume, too; a typical Saami drum hammer found in Rendalen, southern Norway, has previously been discussed in terms of 'cultural mixture' due to its mix of decorative patterns that may be related to both Norse and Saami culture (Pareli 1991; Zachrisson 1997). In her present article, however, Hege S. Gjerde rather explores the meaning of *voids*, both in the décor of this object and in-between our definitions of archaeological material and groups in the past. While not settling on a final answer to what the meaning of the hammer and décor may be, Gjerde follows an interesting path of deconstruction that can be helpful in further developing our understanding of real and imagined categories in the past.

This development over the last few decades has moved Saami archaeology beyond some examples of a somewhat unfortunate 'strategic essentialism' (Spivak 1988; Danius et al. 1993; Olsen 2001a, 2001b). This initial need to claim a coherent 'Saaminess' in the archaeological material was mainly brought on by the continuous external pressure to prove the presence of Saami groups in certain areas in the past or the ethnic affinity of specific heritage sites or archaeological material. The urgency of such proof has depended on the context in question, both regarding the audience of any statements

about Saami pasts and what parts of the Saami past and territory we are discussing. In core Saami reindeer herding areas like inner Finnmark, interpretations of medieval heritage sites as Saami are less controversial (if not always uncontroversial) than in border areas like southern Norway and Sweden or in Saami landscapes of the Coastal or Forest Saami (Zachrisson 1997; Larsson 2001; Bergstøl and Reitan 2008; Dunfjeld-Aagård 2009; Baglo 2019; Larsson this volume).

Thus, it is interesting that several of the authors in this book enable alternative and more diverse interpretations of more or less contested heritage sites, some of which are situated in border zones. Aronsson presents evidence for minimal landscape use around the much-debated Stállo house foundations. He combines elements of previously conflicting theories by suggesting they were used by the Saami for trade meetings with Norwegian chieftains. Bergstøl compares the similar coral hunting installation for wild reindeer in the north and south of Norway and asks whether this technique should be seen as a result of hybrid practices performed by both the Saami and Norse/Norwegian population, in collaboration or inspired by each other. Similarly, Amundsen and Os emphasize the possible Saami connection to the large hunting enclosures found in Hedmark in southeastern Norway and their similarity to later known fences for separating reindeer herds, while acknowledging the challenges of defining the use of such installations in this border zone. Importantly, in whatever way these sites are interpreted in terms of the ethnic affiliation of the users, they are of interest to the study of Saami pasts as part of Saami landscapes, affecting Saami people and their landscape use.

There is obviously room for these debates in current Saami archaeology, but it may be more challenging to communicate the complexities of this research to the general public, not least in contexts where the portrayal of Saami pasts can have repercussions for law and policy-making.

Saami archaeology, politics, and colonialism

Saami archaeology is undoubtedly an arena for political statements. As such, the initiation of Saami archaeology was in itself part of the political debate of the 1970s and 1980s, particularly triggered by the famous protests against the building of the Alta river hydroelectric dam in Finnmark, Norway. Awareness of Saami presence and Saami issues and the relation between documenting the Saami past and their rights in today's modern society was at the core of the early archaeological efforts, and still is today. Insistence from some fellow archaeologists to keep the research 'objective' and unrelated to politics represents an oxymoron that actively disregards the inherent political aspect of documenting Saami pasts.

Thus, the understanding of the study of Saami pasts as an inherently political issue has made it a contested topic, but most archaeologists working with Saami pasts today are highly aware of the political aspects of any such study, as well as the necessity of performing studies in cooperation and agreement with local indigenous groups. In a recent article, based on a series of interviews, archaeologist Eeva-Kristiina Harlin (2019) states that Finnish archaeologists fear political involvement when writing about Saami archaeology. We would somewhat disagree; younger generations of Finnish archaeologists especially are aware of the political aspects of their field. For example, the University of Oulu have taught regular courses in archaeological ethics since 2007, including questions about the political use of archaeology. One reason for her conclusion seems to be that Harlin links the critical attitude among some archaeologists to discussions about ethnicity in prehistoric societies to her claims that archaeologists do not want to make statements that could be used politically. However, theoretical boundaries concerning the time-depth of current ethnic groups should not to be confused with negligence of the cultural affiliation many indigenous groups feel to the past.[1] "For the indigenous

1. "Cultural affiliation" means a common group identity that can justifiably be traced from the current group to an identified historical or prehistoric group (http://www.nps.gov/history/nagpra/TRAINING/Cultural_Affiliation.pdf). "Descendant community" refers to a broader definition; it means a non-uniform, self-identifying group, whose members, no matter what their backgrounds, identify with a certain place or past through common traditions, proximity, or collective memories (Nicholas and Hollowell 2007: 1).

peoples roots can be 'timeless'", as Harlin states, referring to Jelena Porsanger's keynote paper at the *Advances in Sámi Archaeology conference* (Porsanger 2018; Harlin 2019: 263). For some archaeologists, the questions of scientifically proven age of Saami ethnicity and questions of repatriation might be tied together, but this is not generally the case. It would have been interesting to see the age-structure of the researchers interviewed by Harlin and whether there are differences of opinions between generations.

The political aspect of Saami archaeology becomes conspicuously evident in court cases, such as those described by Malin Brännström in her article in this volume. The article also grapples with the challenges of presenting the complex past discussed above to audiences with diverse backgrounds and objectives for seeking out this information. Brännström compares how archaeological and historical material has been presented, understood, and used in two court cases concerning Saami land rights in Sweden. She stresses the importance of making the complexity and meaning of archaeological finds understandable to the courts to ensure well-informed rulings. Brännström's article was written before the final court ruling, which eventually went in favour of Saami claims and against the Swedish state. The government has since declared that the relevant Reindeer Herding Act, which regulates much of the land use and ownership in Saami areas, is to be re-evaluated (Heikki 2020).

Unfortunately, such court cases have also engendered hostilities between Saami and non-Saami locals. Following the most recent Girjas case, we have seen harassment of Saami through online fora, direct threats, and killing of reindeer (Moreno 2020). In such situations, it may seem useless and counter-productive to admit to any uncertainty about the ethnic affiliation of certain cultural expressions. However, if we wish to maintain the legitimacy of archaeology, we obviously have to communicate even complicated issues. The challenge is perhaps rather to do this in a way that defeats and bypasses prevailing stereotypes and (internalized) hegemonic structures.

Such stereotypes and hegemonic structures are part of the effects of colonialism on Saami culture and on our understanding and presentation of Saami pasts, which has been another central topic in Saami archaeology (e.g., Olsen 2000b; Hansen and Olsen 2014; Hood 2015; Spangen et al. 2015; Spangen 2015). Over the last decade, the early modern state colonization of Saami areas has increasingly been debated within the broader context of colonialism at that time (Nordin 2012; Immonen 2013; Hood 2015; Nordin and Ojala 2015; Ojala and Nordin 2015; Äikäs and Salmi 2019). In this volume, Carl-Gösta Ojala discusses these issues concerning Swedish colonialism in Sápmi as it occurred through mine developing and missionary activity, and what legacies remain today. Thomas Wallerström also discusses how early modern state influence shaped the Saami settlement patterns we can trace today, which is thus not to be confused with an age-old 'authentic' Saami social organization.

Consequently, the articles in this volume illustrate the breadth and complexities of Saami archaeology as well as Saami pasts, and the width of theoretical and methodological approaches required to develop further knowledge. Research efforts over several decades have made Saami archaeology a broadly accepted and hopefully inspirational transdisciplinary field in the Nordic countries. One aim should be to maintain and reinforce a position for Saami cultural history as an obvious integrated part of our common pasts in northern Fennoscandia and northern Europe (Olsen 2004; Hansen and Olsen 2014). While the central topics, as presented here, remain quite traditional, new approaches promise exciting developments within the field in years to come. This includes a potential for broadening our research questions into new aspects of Saami societies, economy, and culture by taking into account new evidence and reconsidering old, as well as developing the already well-established interdisciplinarity further, for instance, in terms of combining archaeology with linguistic and onomastic evidence (e.g., Piha 2018).

Are we there yet?

While the presentations at the 2018 *Advances in Sámi Archaeology* conference showed vibrant activity within the research field, there are still challenges that will need to be met to maintain this situation. A limited number of researchers are working on topics within the vast area of Sápmi. Consequently, some areas are fairly well explored, some site or object types widely debated, and some issues continuously discussed, while others have received little or no systematic attention. Some of the most striking lacunae may be the limited amount of comparative work across the national borders, with some notable (multidisciplinary) exceptions (e.g., Ljungdahl and Norberg 2013; Myrvoll et al. 2015, Nielssen 2017), and the lack of knowledge about essential issues, such as long-term Saami population and habitation history, which is obviously of great importance to an understanding of the general societal organization in various regions. Geographically, the Saami archaeology of the Kola peninsula is perhaps least explored so far, though there has been some research activity, with recent interesting results including the finding of similar row-organized hearths in Liva, Murmansk, as in other areas of Sápmi (Murashkin and Kolpakov 2019). However, there is still need for more extensive investigations in the Russian parts of Sápmi, and indeed studies of medieval archaeology here at all (Murashkin and Kolpakov 2019: 75). We regret that no Russian authors were able to contribute to this publication to that end. Continued contact and research collaborations across national borders, such as in the 2018 conference, may help to address some of these current biases.

In line with the initial statement about what creates and develops a scientific field, efforts should also be made to maintain many different voices involved in the discussions about Saami pasts, including continuous communication with different stakeholders among Saami groups and recruiting new professional voices. Currently, it is only at UiT – the Arctic University of Norway in Tromsø that Saami archaeology is taught systematically as an integrated part of the courses in archaeology. Only a small number of students at this intuition choose to specialize in this topic, despite the continuous need for professional archaeologists with knowledge of Saami cultural history within research, dissemination, and in heritage management institutions. Even if Saami archaeology today has a number of active researchers and stewards that identify as Saami, there is also a continuous need to recruit students with Saami backgrounds.

It is difficult to measure the exact number of researchers engaged in the field of Saami archaeology today, as many only have this as one (minor) part of their research agenda. However, there seems to be a fairly widespread interest, not least judging from participation at the 2018 conference. The researchers conducting Saami archaeology are affiliated with a range of institutions and include independent researchers without institutional backing. In his blog, archaeologist Petri Halinen (2019) asks if Saami archaeology could be strengthened by giving one institution the responsibility for coordinating such research, and if so, if that should be a national institution, like the Finnish Heritage Agency (FHA) in the case of Finland, or a Saami institution, like Sámi Museum Siida (which hosted the conference in Inari). Halinen suggests that FHA and Siida could plan and coordinate Saami archaeology together. In our opinion, the current system and funding of the FHA does not readily support this solution, but coordinating researchers with an interest in the field who are currently working somewhat isolated from each other in different organizations could be beneficial.

Another, but related, problem is that many researchers work in temporary positions or only perform research in Saami archaeology within time-limited projects. Making more money available for research projects of this kind is of course important and what has been funded so far has produced many important results (e.g., Myrvoll et al. 2015; Bergman 2018), but to ensure continuity it would be beneficial to establish more permanent positions with this main focus. One seat was initially dedicated to the field at UiT (then University of Tromsø) in the 1990s, currently held by Professor Bjørnar Olsen. Unfortunately, there is no reason to think that any of the other Nordic universities will pri-

oritize establishing a position specifically for Saami archaeology any time soon. Therefore, we would like to suggest a Nordic professorship, possibly to be held for a set but extensive time period. This could be jointly funded by the states with a Saami population and circulate between these countries to ensure a continuous revitalization of the research agenda and, presumably, a regrowth of students, young researchers, and projects dealing with related topics in each country.

To sum up, Saami archaeology has made great strides in recent years, but the discipline is not yet where it needs to be: not with the infrastructure of the field nor with any of the debates touched on in this book, and not with the social and political role of Saami archaeology nor with the way we communicate our research within and outside the research community. However, it is encouraging to see the commitment of so many researchers who continue to explore these issues with the resources and approaches available. Hopefully, this volume will challenge and inspire, and thus contribute to continued 'friction', debate, and further advances in Saami archaeology.

Acknowledgments

We would first and foremost like to thank **Eija Ojanlatva** and **Eeva-Kristiina Harlin** for their substantial part in making the *Advances in Sámi Archaeology* conference a reality. We also thank **Taarna Valtonen** and **Charlotte Damm** for their comments on a draft of this introduction.

Bibliography

Äikäs, T. 2015. *From Boulders to Fells. Sacred Places in the Sámi Ritual Landscape*. Monographs of the Archaeological Society of Finland 5. Helsinki: Archaeological Society of Finland.

Äikäs, T. and A.-K. Salmi (eds.). 2019. *The Sound of Silence. Indigenous Perspectives on the Historical Archaeology of Colonialism.* New York: Berghahn Books.

Äikäs, T. and M. Spangen. 2016. New users and changing traditions: (Re)defining Sami offering sites. *European Journal of Archaeology* 19(1): 95–121.

Andersen, O. 2011. Reindeer-herding cultures in Northern Nordland, Norway: Methods for documenting traces of reindeer herders in the landscape and for dating reindeer-herding activities. *Quaternary International* 238(1–2): 63–75.

Arell, N. 1977. *Rennomadismen i Torne lappmark. Markanvändning under kolonisationsepoken i fr.a. Enontekis socken*. Kungl. Skytteanska samfundets handlingar 17. Umeå: Umeå Universitet.

Aronsson, K-Å. 1991. *Forest Reindeer Herding A.D. 1–1800. An Archaeological and Palaeoecological Study in Northern Sweden*. Archaeology and environment 10. PhD thesis. Umeå, Umeå Universitet.

Atalay, S. 2006. Indigenous archaeology as decolonizing practice. *American Indian Quarterly* 30: 280–310.

Atalay, S. 2012. *Community-Based Archaeology: Research with, by, and for Indigenous and Local Communities*. Berkeley: University of California Press.

Baglo, C. 2019. The disappearance of the Sea Sámi as a cultural display category. *Nordic Museology* 27(3): 25–44.

Barlindhaug, S. 2013. *Cultural Sites, Traditional Knowledge and Participatory Mapping. Long-term Land Use in a Sámi Community in Coastal Norway*. PhD thesis. Tromsø, University of Tromsø.

Battle-Baptiste, W. 2017. *Black Feminist Archaeology*. London: Routledge.

Bergman, I. 2018. *Kulturarv, landskap och identitetsprocesser i norra Fennoskandien 500−1500 e.kr. Slutrapport från et forskningsprogram*. Stockholm: Riksbankens jubileumsfond / Makadam förlag.

Bergman, I., L. Liedgren, L. Östlund, and O. Zackrisson. 2008. Kinship and settlements: Sami residence patterns in the Fennoscandian Alpine areas around A. D. 1000. *Arctic Anthropology* 45(1): 97–114.

Bergman, I., O. Zackrisson, and L. Liedgren. 2013. From hunting to herding: Land use, ecosystem processes, and social transformation among Sami AD 800–1500. *Arctic Anthropology* 50(2): 25–39.

Bergstøl, J. 2008. *Samer i Østerdalen? En studie av etnisitet i jernalderen og middelalderen i det nordøstre Hedmark*. Acta humaniora 325. Oslo: University of Oslo.

Bergstøl, J. and G. Reitan, 2008. Samer på Dovrefjell i vikingtiden: Et bidrag til debatten omkring samenes sørgrense i forhistorisk tid. *Historisk tidsskrift* 87(1): 9–189.

Bjørklund, I. 2013. Domestication, reindeer husbandry and the development of Sámi pastoralism. *Acta Borealia* 30(2): 174–189.

Bjørnstad, G., Ø. Flagstad, A.K. Hufthammer, and K.H. Røed. 2012. Ancient DNA reveals a major genetic change during the transition from hunting economy to reindeer husbandry in Northern Scandinavia. *Journal of Archaeological Science* 3(1): 102–108.

Bruun, I.M. 2007. *Blandede graver - blandede kulturer? En tolkning av gravskikk og etniske forhold i Nord-Norge gjennom jernalder og tidlig middelalder*. Master's thesis. Tromsø, University of Tromsø.

Danius, S., S. Jonsson, and G.C. Spivak. 1993. An interview with Gayatri Chakravorty Spivak. *Boundary 2* 20(2): 24–50.

Dunfjeld-Aagård, L. 2009. Interpretation of historical and archaeological sources in the South Sami coastal area in Norway. In P. Halinen, M. Lavento, and M. Suhonen (eds.): *Recent Perspectives on Sámi Archaeology in Fennoscandia and North-West Russia. Proceedings of the First International Conference on Sámi Archaeology, Rovaniemi, 19–22 October 2006*, pp. 116–120. Iskos 17. Helsinki: The Finnish Antiquarian Society.

Dury, J.P.R., G. Eriksson, M. Fjellström, T. Wallerström, and K. Lidén. 2018. Consideration of freshwater and multiple marine reservoir effects: Dating of individuals with mixed diets from Northern Sweden. *Radiocarbon* 60(5): 1561–1585.

Fjellström, M. 2020. *Food Cultures in Sápmi. An Interdisciplinary Approach to the Study of the Heterogeneous Cultural Landscape of Northern Fennoscandia AD 600–1900*. Theses and Papers in Scientific Archaeology 16. PhD thesis. Stockholm, Stockholm University.

Fjellström, M., Å. Lindgren, O. Lopez-Costas, G. Eriksson, G., and K. Lidén. In prep. Food, mobility and health in an Arctic 17th−18th century mining population. *Arctic* (submitted).

Fossum, B. and E. Norberg. 2012. Reflexioner kring dokumentation av traditionell kunskap och arkeologi på sydsamiskt område. In E. Ljungdahl and E. Norberg (eds.): *Ett steg till på vägen. Resultat och reflexioner kring ett dokumentationsprojekt på sydsamiskt område under åren 2008−2011*, pp. 8–31. Östersund: Gaaltije.

Gjerde, H.S. 2016. *Sørsamisk eller førsamisk? Om arkeologi og sørsamisk forhistorie.* PhD thesis. Oslo, University of Oslo.

González-Ruibal, A. 2009. Vernacular cosmopolitanism. In L. Meskell (ed.): *Cosmopolitan Archaeologies*, pp. 113–139. Durham, NC: Duke University Press.

González-Ruibal, A. 2019. Ethical issues in Indigenous archaeology: Problems with difference and collaboration. *Canadian Journal of Bioethics* 2(3): 34–43.

Hakamäki, V. 2016. Late Iron Age transculturalism in the Northern "periphery": Understanding the long-term prehistoric occupational area of Viinivaara E, Finland. *Acta Borealia* 33(1): 30–51.

Halinen, P. 2019. Saamelaisarkeologian tutkimusta yhteistyönä. Museoviraston blogi. Available at: http://blogi.nba.fi/saamelaisarkeologian-tutkimusta-yhteistyona [Accessed 20 June 2020].

Hall, S. 2007. Epilogue: Through the prism of an intellectual life. In B. Meeks and S. Hall (eds.): *Culture, Politics, Race and Diaspora. The Thought of Stuart Hall*, pp. 269–291. London: Lawrence and Wishart.

Hansen, L.I. and B. Olsen. 2014. *Hunters in Transition. An Outline of Early Sámi History*. Leiden: Brill.

Harlin, E-K. 2019. Sámi archaeology and the fear of political involvement: Finnish archaeologists' perspectives on ethnicity and the repatriation of Sámi ccultural heritage. *Archaeologies* 15(2): 254–284.

Hedman, S-D. 2003. *Boplatser och offerplatser. Ekonomisk strategi och boplatsmönster bland skogssamer 700–1600 AD*. Studia archaeologica Universitatis Umensis 17. PhD thesis. Umeå, Umeå University.

Hedman, S-D. and B. Olsen. 2009. Transition and order: A study of Sámi rectangular hearths in Pasvik, Arctic Norway. *Fennoscandia archaeologica* 26: 3–22.

Hedman, S-D., B. Olsen, and M. Vretemark. 2015. Hunters, herders and hearths: Interpreting new results from hearth row sites in Pasvik, Arctic Norway. *Rangifer* 35(1): 1–24.

Heikki, J. 2020. Regeringen tillsätter utredning efter Girjasdomen. *Sveriges Radio*. Available at: https://sverigesradio.se/sida/artikel.aspx?programid=2327andartikel=7487942 [Accessed June 10, 2020].

Henriksen, J.E. 2016. *Kulturmøte og identitet på Finnmarkskysten i tidlig historisk tid. Tolkninger basert på arkeologiske analyser av mangeromstufter*. PhD thesis. Tromsø, UiT – Arctic University of Norway.

Hood, B.C. 2015. Framing Sámi entanglement in Early Modern colonial processes: Ethnohistorical and archaeological perspectives from Interior North Norway. *Arctic Anthropology* 52(2): 37–56.

Hultblad, F. 1968. *Övergång från nomadism till agrar bosättning i Jokkmokks socken*. In [editor's name] (ed.): *Acta Lapponica* 14. Stockholm: Almqvist and Wiksell / Geber.

Immonen, V. 2013. Intercontinental flows of desire: Brass kettles in Lapland and in the colony of New Sweden. In M. C. Beaudry and T. G. Parno (eds.): *Archaeologies of Mobility and Movement. Contributions to Global Historical Archaeology*, pp. 17–30. New York: Springer.

Jerand, P., J. Linderholm, S-D. Hedman, and B. Olsen. 2016. Spatial perspectives on hearth row site organisation in Northern Fennoscandia through the analysis of soil phosphate content. *Journal of Archaeological Science: Reports* 5: 361–373.

Kirkinen, T., A. Arponen, and I. V. Berghe. 2019. Globalization and tradition in forest Sámi commemoration rituals: Textiles and animal skins in the 17th-century burial ground in Mukkala, Eastern Lapland, Finland. In K. Mannermaa, M. A. Manninen, P. Pesonen and L. Seppänen (eds.): *Helsinki Harvest. Proceedings of the 11th Nordic Conference on the Application of Scientific Methods in Archaeology*. Monographs of the Archaeological Society of Finland 7. Helsinki: Archaeological Society of Finland.

Kylli, R., A-K. Salmi, T. Äikäs, and S. Aalto. 2019. "Not on bread but on fish and by hunting": Food culture in Early Modern Sápmi. In T. Äikäs and A-K. Salmi (eds.): *The Sound of Silence. Indigenous Perspectives on the Historical Archaeology of Colonialism*, pp. 119–140. New York, Berghahn Books.

Larsson, L-G. 2001. Sockenlapparnas språk. *Saga och sed* 2000: 61–69.

Lehtola, V-P. 2012. *Saamelaiset suomalaiset. Kohtaamisia 1896–l953*. Helsinki: Suomalaisen kirjallisuuden seura.

Lidén, K., M. Fjellström, and T. Wallerström. 2017. Nya resultat från Eskil Olssons Rounala-utgrävning 1915. In T. Wallerström (ed.): *Kunglig makt och samiska bosättningsmönster. Studier kring Väinö Tanners vinterbyteori*, pp. 282–308. Instituttet for sammenlignende kulturforskning 165. Oslo: Novus.

Ljungdahl, E. and E. Norberg. 2012. *Ett steg till på vägen. Resultat och reflexioner kring ett dokumentationsprojekt på sydsamiskt område under åren 2008–2011*. Östersund: Gaaltije.

Merriman, N. 2004. *Public Archaeology*. London: Routledge.

Mulk, I-M. 1994. *Sirkas. Ett samiskt fångstsamhälle i förändring Kr.f.–1600 e.Kr.* Umeå: Umeå University.

Murashkin, A.I. and E.M. Kolpakov. 2019. Liva 1: The first medieval Sámi site with rectangular hearths in Murmansk Oblast (Russia). In P. Halinen and B. Olsen (eds.): *In Search of Hearths. A Book in Memory of Sven-Donald Hedman. Proceedings of the Seminar Dedicated to the Memory of Sven-Donald Hedman. University of Tromsø - The Arctic University of Norway, March 4, 2016*. Iskos 22, 75–87. Helsinki: The Finnish Antiquarian Society.

Myrvoll, M. and B. Evjen. 2015. *Från kust til kyst. Áhpegáttest áhpegáddáj. Møter, miljø og migrasjon i pitesamisk område*. Stamsund: Orkana akademisk.

Nielssen, A. R. 2017. *Gielas / Kjølen. Arkeologi og historie i lule- og sørsamisk område*. Tjálarájddo – *Árran* julevsáme guovdasj 2. Drag: Árran.

Nordin, J. M. 2012. Embodied colonialism: The cultural meaning of silver in a Swedish colonial context in the 17th century. *Post-Medieval Archaeology* 46(1): 143–165.

Nordin, J. M. 2017. Center of diversity: Sámi in Early Modern Stockholm in the light of European colonial expansion. A historical archaeological approach. *International Journal of Historical Archaeology* 22(4): 663–685.

Nordin, J. M. and C-G. Ojala. 2015. Collecting Sápmi: Early Modern collecting of Sámi material culture. *Nordic Museology* 2015(1): 114–122.

Nurmi, R. 2009. The others among us? Saami artefacts in the 17th century urban context in the Tornio Town, Northern Finland. In T. Äikäs (ed.): *Máttut – Máddagat. The Roots of Saami Ethnicities, Societies and Spaces / Places*, pp.68–87. Publications of the Giellagas Institute 12. Oulu: Giellagas Institute.

Odner, K. 1983. Finner og terfinner: Etniske prosesser i det nordlige Fenno-Skandinavia. Oslo *Occasional Papers in Social Anthropology* 9. Oslo: Oslo Universitetet.

Ojala, C-G. and J. M. Nordin. 2015. Mining Sápmi: Colonial histories, Sámi archaeology, and the exploitation of natural resources in Northern Sweden. *Arctic Anthropology* 52(2): 6–21.

Olsen, B. 1997. *Fra ting til tekst. Teoretiske perspektiv i arkeologisk forskning*. Oslo: Universitetsforlaget.

Olsen, B. 2000a. Belligerent chieftains and oppressed hunters? Changing conceptions of inter-ethnic relationships in Northern Norway during the Iron Age and Early Medieval Period. In M. Appelt, J. Berglund, and H. C. Gulløv (eds.): *Identities and Cultural Contacts in the Arctic. Proceedings from a Conference at the Danish National Museum, Copenhagen*, pp. 28–42. Danish Polar Center Publications 8. Copenhagen: Danish Polar Centre.

Olsen, B. 2000b. Bilder fra fortida? Representasjoner av samisk kultur i samiske museer. *Nordisk Museologi* 2000(2): 13–30.

Olsen, B. 2001a. '-at ikke Fremmede skulle raade over en Jordbund, som gjemmer vore Fædres Been og hvortil vore helligste og ærværdigste Minder ere knyttede': Problemer knyttet til bruken av fortid og kulturminner i diskurser om opphav, rettigheter og identitet. In T. Thuen (ed.): *Fortidsforståelser*, pp. 71–92. Kulturstudier 18. Kristiandsand: Høgskoleforlaget.

Olsen, B. 2001b. The end of history? Archaeology and the politics of identity in a globalized world. In R. Layton, J. Thomas, and P. G. Stone (eds.): *Destruction and Conservation of Cultural Property*, pp. 42–54. London: Routledge.

Olsen, B. 2004. Hva er samisk forhistorie? In M. Krogh and K. Schanche (eds.): *Samisk forhistorie*, pp. 20−30. Varangerbotn: Varanger Sámi Museum.

Olsen, B. 2010. *In Defense of Things. Archaeology and the Ontology of Objects*. Lanham: AltaMira Press.

Olsen, B., P. Urbańczyk, and C. Amundsen, C. 2011. *Hybrid Spaces. Medieval Finnmark and the Archaeology of Multi-Room Houses*. Oslo: Novus Press.

Pareli, L. 1991. Runebommehammeren fra Rendalen: Et minne etter samer i Sør-Norge i middelalderen? *Åarjel-saemieh* 4: 21–24.

Phillips, C., and H. Allen. 2010. *Bridging the Divide. Indigenous Communities and Archaeology into the 21st century*. Walnut Creek: Left Coast Press.

Piha, M. 2018. Combining proto-scandinavian loanword strata in South Saami with the Early Iron Age archaeological material of Jämtland and Dalarna, Sweden. *Finnisch-Ugrische Forschungen* 64: 118–233.

Porsanger, J. 2018. *Doložiid dutkama etihkka álgoálbmotkonteavsttas / Studies of the Past and Research Ethics in Indigenous Context*. Keynote paper from the conference "Advances in Sámi Archaeology", Inari, Finland, 4 June 2018.

Røed, K.H., I. Bjørklund, and B. J. Olsen. 2018. From wild to domestic reindeer: Genetic evidence of a non-native origin of reindeer pastoralism in Northern Fennoscandia. *Journal of Archaeological Science: Reports* 19: 279–286.

Salmi, A.-K., T. Äikäs, M. Fjellström, and M. Spangen. 2015. Animal offerings at the Sámi offering site of Unna Saiva: Changing religious practices and human-animal relationships. *Journal of Anthropological Archaeology* 40: 10–22.

Salmi, A.-K., T. Äikäs, M. Spangen, M. Fjellström, and I-M. Mulk. 2018. Tradition and transformation in Sámi animal-offering practices. *Antiquity* 92(362): 472–489.

Salmi, A.-K., A. Tranberg, and R. Nurmi. 2018. Indigeneity, locality, modernity: Encounters and their effects on foodways in Early Modern Tornio. In F. Ekengren and M. Naum (eds.): *Facing Otherness in Early Modern Sweden. Travel, Migration and Material Transformations, 1500–1800*, pp. 47–60. Society for Post-medieval Archaeology Monograph 10. Woodbridge: Boydell and Brewer.

Schanche, A. 1993. Kulturminner, identitet og etnisitet. *Dugnad* 19(4): 55–64.

Schanche, A. and B. Olsen. 1985. Var de alle nordmenn? En etnopolitisk kritikk av norsk arkeologi. In J-R. Næss (ed.): Arkeologi og etnisitet, pp. 87–99. *AmS-varia* 15. Stavanger: Arkeologisk museum i Stavanger.

Sommerseth, I. 2011. Archaeology and the debate on the transition from reindeer hunting to pastoralism. *Rangifer* 31(1): 111–127.

Spangen, M. 2005. *Edelmetalldepotene i Nord-Norge. Komplekse identiteter i vikingtid og tidlig middelalder*. Master's thesis. Tromsø, University of Tromsø.

Spangen, M. 2009. Silver hoards in Sami areas. In P. Halinen, M. Lavento, and M. Suhonen (eds.): *Recent Perspectives on Sámi Archaeology in Fennoscandia and North-West Russia. Proceedings of the First International Conference on Sámi Archaeology, Rovaniemi, 19–22 October 2006*, pp. 94–106. Iskos 17. Helsinki: The Finnish Antiquarian Society.

Spangen, M. 2010. Guder-makter-mennesker-ting: Om deponering av sølv som offer. *Viking* 73: 61–80.

Spangen, M. 2015. Without a Trace? The Sámi in the Swedish History Museum. *Nordic Museology* 2: 17–32.

Spangen, M. 2016. *Circling Concepts. A Critical Archaeological Analysis of the Notion of Stone Circles as Sami Offering Sites*. Stockholm Studies in Archaeology 70. Stockholm: Stockholm University.

Spangen, M. and M. Fjellström. 2018. A fishy tale about a sheep and a dog: Isotope studies and medieval Sámi mobility and husbandry in Inner Finnmark, Northern Norway. *Fennoscandia Archaeologica* XXXIV: 3–17.

Spangen, M., A-K. Salmi, and T. Äikäs, T. 2015. Sámi archaeology and postcolonial theory: An introduction. *Arctic Anthropology* 52(2): 1–5.

Spivak, G. 1988. Can the subaltern speak? In C. Nelson and L. Grossberg (eds.): *Marxism and the Interpretation of Culture*, pp. 271–313. Urbana: University of Illinois Press.

Spivak, G.C. 2012. *Outside in the Teaching Machine*. London: Routledge.

Storli, I. 1996. On the historiography of Sami reindeer pastoralism. *Acta Borealia* 13(1): 81–115.

Wallerström, T. 2000. The Saami between East and West in the Middle Ages: An archaeological contribution to the history of reindeer breeding. *Acta Borealia* 17(1): 3–39.

Wobst, H.M. 1978. The archaeo-ethnology of hunter-gatherers or the tyranny of the ethnographic record in archaeology. *American Antiquity* 43(2): 303–309.

Wylie, A. 1992. The interplay of evidential constraints and political interests: Recent archaeological research on gender. *American Antiquity* 57(1): 15–35.

Zachrisson, I. 1997. *Möten i gränsland. Samer och germaner i Mellanskandinavien*. Stockholm: Statens historiska museum.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

1
Funnel-shaped reindeer trapping systems in Hedmark – Saami or Norse?*

Hilde Rigmor Amundsen[1] and Kristin Os[2]

Abstract

The ethnic relationship of trapping systems for wild reindeer located in Hedmark in the south-eastern part of Norway is analysed and discussed. The so-called funnel-shaped reindeer trapping systems were in use in the Iron Age and the Middle Ages, and even into post-medieval times. Reindeer hunting served as an economic base, as is apparent from time and effort used to build and maintain the systems, to execute the hunt itself, and to subsequently process and distribute the products of the hunt. The systems are designed for mass-hunting, for catching large herds of reindeer within a limited time frame. While they are considered to be of Saami origin in northern Norway, their origins in the south are more debatable. The reason for the diversity in opinion could be the complex or 'mixed' cultural history in the mountains of southern Norway. Traces of Saami presence are few, while the Norse material culture is more visible. At the same time, the trapping systems are in areas where there was a Saami existence over a long period of time. The similarities of the systems in the different regions make it pertinent to investigate the cultural relationships of the trapping systems in southern Norway.

Keywords: Reindeer hunting, trapping systems, mountains, Saami, Norse, ethnicity

1.1 Introduction

Funnel-shaped trapping systems for reindeer (*Rangifer tarandus tarandus*) are a specific type of cultural heritage monument in the mountains in Hedmark County**, where three such systems are known and referred to as the 'Hedmark systems'. These systems were in use in the Iron Age and the Middle Ages, and probably also into post-medieval times. They are in the northern mountain areas, in today's municipalities of Alvdal, Rendalen, and Engerdal.

In the Iron Age and the medieval period, reindeer hunting served as an economic base for communities. This is apparent from the time and effort used to build and maintain the systems, the hunt itself, and the processing and the distribution of the products of the hunt. The systems were made for mass-hunting where it was possible to catch large herds of wild reindeer within a limited time frame. The systems consist of converging fences, which led the reindeer into an enclosed area for trapping and killing. Many people must have participated in the various operations, but to which cultures did those people belong?

1. The Norwegian Institute for Cultural Heritage Research (NIKU), hilde.amundsen@niku.no
2. The Norwegian Institute for Cultural Heritage Research (NIKU), os.kristin@outlook.com

* This article is an extended version of an earlier paper in Norwegian, published in the journal Heimen in 2015 (Amundsen and Os 2015).

**From 2020 the former administrative counties Hedmark and Oppland are part of the new administrative unit Innlandet county.

Based on the varied finds and their contexts, several questions can be asked about the cultural origins and use of the systems. The main question is whether the funnel-shaped reindeer trapping systems in Hedmark can be linked to a Saami or a Norse population. Another question is, whether the two cultural groups collaborated in the hunting activities. The three identified systems are located within areas with a long-established Saami presence but at the same time, permanent Norse settlements developed from at least the Iron Age. Even though these trapping systems have been known in southern Norway for a long time, the question of their cultural origin has rarely been discussed, although similar systems are considered to be of Saami origin in the northern part of Norway.

The issue will be explored by discussing the construction of the Hedmark systems, their scope, location, and date, and an attempt is made to connect the systems to nearby finds and contexts. Furthermore, historical documents referring to contacts between Saami and Norse groups will be discussed. Through this analysis, we will seek to provide a better understanding of the question of cultural origins and use of the extensive hunting of wild reindeer in past societies of the southern mountains.

1.2 Funnel-shaped reindeer trapping systems

Funnel-shaped reindeer trapping systems are known throughout the circumpolar area, from Alaska, Canada, Greenland, Northern Finland, northern Siberia, and in northern Scandinavia (E. Barth 1977: 46; A. Fossum 1996; Hansen and Olsen 2004; Hole 2013). Generally, the systems consist of converging drive fences leading to large enclosures. Reindeer were moved along the fences towards the enclosures, where they were captured and killed. The size and type of the systems varies depending on topography and the purpose and extent of the hunt as well as the migration routes and movements of the reindeer. The systems are designed for catching large herds within a short period of time, hence the term 'mass-hunting'.

In southern Norway several funnel-shaped trapping systems have been identified, especially in the mountains of Jotunheimen, Reinheimen, Snøhetta, Dovrefjell, and Rondane in Oppland County, located west of Hedmark (overviews in Jordhøy et al. 2012, Jordhøy 2013; Hole 2013). The zoologist Edvard K. Barth (1913–1996) and Sonja Barth (1923–2016) were pioneers in mapping several of these systems, whose construction and sizes vary.

On the Varanger peninsula in Finnmark, furthest north in Norway, several funnel-shaped reindeer trapping systems are recognised. Through archaeological surveys and written sources, they date from the Middle Ages to the 17th century, and the systems are associated with a coastal Saami population that carried out hunting activities in the autumn. The systems are also related to the extensive trading of reindeer products beyond the region. Moreover, systems with long, converging fences, named *vuopman* by the Saami, are in some contexts, related to the establishment of domestic reindeer husbandry during the 16–17th centuries. In this connection, intentional slaughtering of wild reindeer was carried out as to prevent them mixing with domestic ones (Leem 1767; Tornæus 1772 [1672]; Fellman 1903/06; Vorren 1998: 205; E. Barth 1977: 45–48).

The surviving systems comprise rows of raised or laid stones, or boulders. Postholes are common, indicating the use of wooden stakes in addition to stone in the systems' constructions. In written sources, the use of trapping systems with rows of wooden stakes is described where pieces of cloth were attached to the top of the stakes, and their movement kept the reindeer inside the trap (Tornæus 1772 [1672], after Barth 1977: 45). The enclosures were usually designed in a way that they were invisible to the reindeer on their way through the fences, and evidence of hunting-blinds and meat stores is often located close to the systems.

1.3 The Hedmark systems

The three Hedmark systems were visited by the authors in the summer of 2013 along with knowledgeable local people (Amundsen and Os 2015). Based on previous descriptions, the three systems are quite different and are located above the tree line in the high mountains: Gravskaret in Alvdal Vestfjell, Vesle Sølenskaret in Rendalen, and Storhøa – Buhøgda in the southern part of Engerdal (Figure 1.1).

The north-westernmost of the three systems is in Alvdal. Due to its location just east of Rondane, it should be seen in conjunction with similar systems further west, for example with those on the Oppland side of the mountain massif (map in E. Barth 1977: 10). The system in Rendalen is located within the mountains of Sølen and the Engerdal-system is located to the south-east. Today, there is a Saami population in Engerdal that keeps reindeer herds that is part of the *Svahken Sijte*, the southernmost Saami settlement area in Norway. A *sijte* (SaaS) is a group of two or more families, often related, but with a common reindeer herd that is managed collectively, and with a fixed migration pattern between different seasonal pastures.

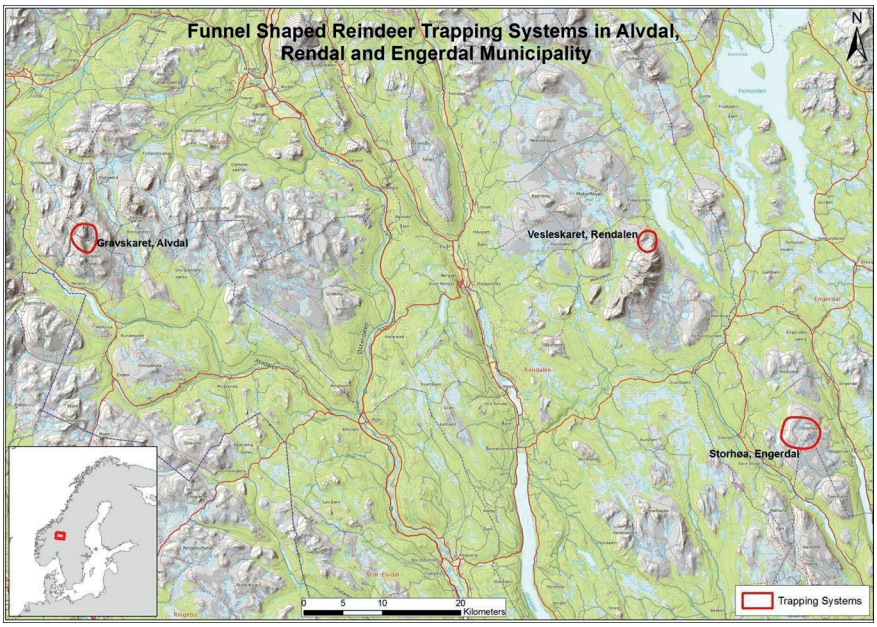


Figure 1.1: The three funnel shaped reindeer trapping systems in Northern Hedmark. (Map: NIKU 2013.)

The archaeological sites and artefacts that could be connected to the systems are described and discussed below. For the most part, there are long distances between the hunting systems in the mountains and the settlements with known find spots in the valleys. However, these landscapes must be seen in context, as they were in common use during prehistoric times and in the Middle Ages. In the small and narrow valleys in Northern Hedmark, people depended on hunting wild animals in the forests and mountains, at least until modern times. Agriculture in these situations yielded fewer returns.

1.4 Gravskaret, Alvdal Vestfjell

The trapping system in Alvdal Vestfjell has previously been discussed (Eggset 1970; E. Barth 1977: 65–71; Nyeggen 2005; Hole and Sørumgård 2013). The system is located just east of Rondane, at the top of the mountain named Gravskaret (c. 1480 m above sea level). In Hedmark and other areas,

place names that contain *'grav'* are often found in areas with trapping systems, both for Scandinavian elk (*Alces alces alces*) and for reindeer (No.: *grav* –to dig, or something that is dug - like a pit).

The system in Gravskaret is relatively small, but complex (Figures 1.2 and 1.3). At the top of the hill, two small pitfalls approximately 12 m apart are located that were made to catch one reindeer at

Figure 1.2: The large enclosure in Gravskaret. The two small pits are located close by, one of them is seen in the foreground. (Photo: NIKU 2013.)

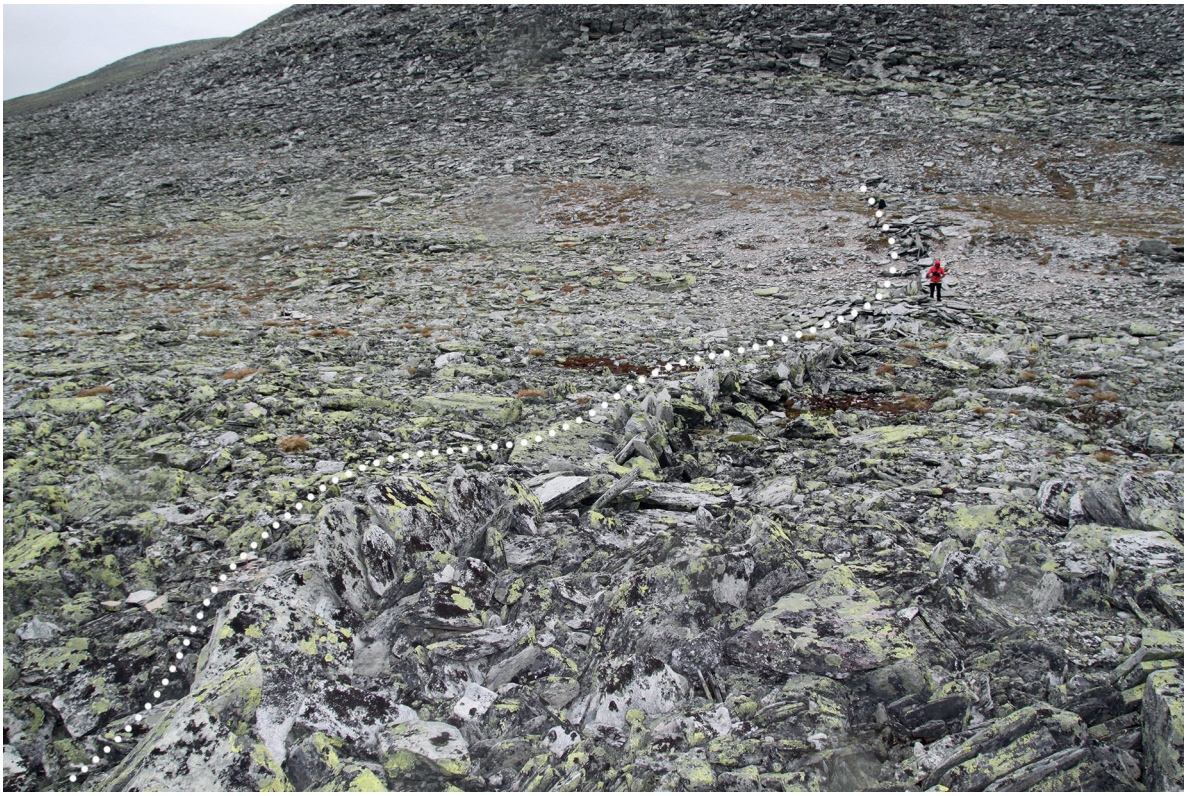


Figure 1.3: Part of the longest fence in the funnel shaped reindeer trapping system at Gravskaret, blocking the mountain pass. (Photo: NIKU 2013.)

a time. In 1975, Barth had a sample from the bottom layer of one pitfall radiocarbon dated, resulting in a late Viking Age date of about AD 960 (E. Barth 1977: 67–68). It must be stated that Barth's sampling methodology of this material for radiocarbon dating would not conform to today's more rigorous requirements, and therefore the date must be considered uncertain.

An approximately 70 m long fence built of laid stones extends from the area of the two pitfalls towards the southeast. A corresponding fence is located across the two pitfalls as well as across the upper part of a large enclosure that measures 11 by 2 m internally. The guiding fences blocked the pass between the mountains and led the reindeer towards the enclosure. Three hunting-blinds are positioned on the slope but further down the terrain (map and sketch in E. Barth 1977: 66). In addition, the archaeologist Runar Hole has mapped another fence that went from the enclosure toward the east-southeast, with two more hunting-blinds (map in Hole 2013: 42–43).

Apart from the hunting-blinds, no other archaeological sites are known in the immediate vicinity of the system in Gravskaret. Located further to the northeast and east, the lakes Breisjøene and Holmsjøen have evidence of settlements from the Stone Age and cooking pits from the early Iron Age (Fretheim 2002). Large rows of pitfalls made for reindeer are noted along the lakes as well as burial mounds, house sites, etc. (Nyeggen 2005). Some of these sites may be related to the use of the funnel-shaped reindeer system at Gravskaret, but further survey and radiocarbon dates are needed to verify this.

No material of definite Saami character can be directly connected to the system in Gravskaret. A type of ski that was in use in large part of the Saami area, and dated to the early Merovingian period was found in a marsh named Kvebergmyra (Sørensen 1982: 65; Zachrisson 1997: 215–216; Bergstøl 2008: 73). A burial located at Røskåsen with culturally mixed finds, was dated within the Merovingian Period / Viking Age, and included iron scrapers of a Saami type (the type R 416, Rygh 1885, see also Gjerde, this volume), along with several Norse artefacts (Zachrisson 1997: 204–205; Bergstøl 2008: 74–75). In addition, two arrowheads of an eastern type, but probably from the Viking Age are found at the places named Finnshø and Gjeitryggen in the neighbouring municipality of Folldal (Bergstøl 2008: 69, 202, 314).

1.5 Vesle Sølenskaret, Rendalen

The funnel-shaped reindeer system in Rendalen municipality is located within the mountain massif of Sølenfjellene (i.e. 'the mountains of Sølen'), more precisely in Vesle Sølenskaret about 1050 m above sea level, located between the mountains Veslesølen and Nordre Sølen (Barth and Barth 1986b).

Like in Gravskaret in Alvdal, the system is relatively small. It is constructed of two long fences, both over 200 m long, which converged on an enclosure at the edge of a natural depression hidden from the entering reindeer. The fences consist of rows of upright stones, small cairns, and postholes for wooden stakes. Parallel, smaller, and more diffuse fences, with raised and overturned stones as well as postholes, ran alongside the system, indicating rebuilding and reuse (Figure 1.4).

Apart from this distinctive system, several other extensive hunting systems are known, both in the mountains of Sølen and in the surrounding forests and mountains, with pitfalls made for both elk and reindeer (Holseng 2004; Mathiesen 2005a, 2005b; Bergstøl 2008: 100–102; Spångberg 2014). From Sølenskaret there are views down to the lakes named Sølensjøene, with documented sites from the Stone Age. At lake Vesle Sølensjøen there is a burial ground that dates from the Iron Age, through the Migration and the Merovingian periods, and possibly also into the Viking Age. Although the burials contained mainly Norse objects, there were some Saami artefacts as well: one Z-shaped scraper of iron dated to the Merovingian period and two iron scrapers related to the type R 416 (Skjølsvold 1980, 1981; Bergstøl 2008: 93–94).

Figure 1.4: Mapping of the funnel shaped reindeer trapping system in Vesle Sølenskaret. (Photo: Per O. Mathiesen, Rendalen 2013.)

In Rendalen valley, several varied objects of Saami origin were found. Although there is some geographical distance from the hunting systems in the mountains, a likely cultural-historical connection is possible. At the farm of Unset, a remarkable silver hoard from the Viking Age was found consisting of two buckles and a large necklace (Bergstøl 2008. 97, 103–104). Silver hoards of this type are known in northern Norway, often located in border areas between Norse and Saami settlements (Zachrisson 1984; Hansen and Olsen 2004; Spangen 2010). Moreover, at the farm Fonnås in Elvål there are several additional finds, the most famous object is a Norse relief brooch, the so-called 'Fonnås-spenna', dated to the Migration period. Among other objects of Norse character from the Viking Age is an arrowhead of the so-called 'Wegraeus' type B' (Wegraeus 1971). These arrowheads occur in Saami sacrificial finds and were found in a burial context at the Saami settlement of Vivallen in Härjedalen in Sweden (Zachrisson 1997: 68–69; Bergstøl 2008: 97). Moreover, at Elvål a Finnish-Ugric bronze jewellery piece, shaped like an animal figure, was found together with a long bronze chain. This type of jewellery is often associated with Saami religious practices and to settlement sites (Gjerde 2010, 2016).

Further south in the valley, a shaman drum hammer has been found at Nordset Farm on the east side of the Rena River. Archaeological investigations have documented that the hammer was deposited in a midden, or a mound, filled with fire-cracked stones along with other objects. The hammer has been radiocarbon-dated to AD 1160–1260, the Early Middle Ages. On the one side of the hammer, there is an incised Norse motif, the so called 'Ringeriks-style' from late Viking Age – early medieval period. On the other side there is an interlace pattern with parallels to later Saami ornaments (Gjessing 1945; Fuglesang 1980; Pareli 1991; Zachrisson 1997; Bergstøl 2008). The decoration on the hammer is interpreted as mixing Norse and Saami elements, and reflecting contacts and networks in the Middle Ages (Hansen and Olsen 2004: 105–109, Bergstøl 2008: 98–99, see also Gjerde in this volume).

On the other side of the Rena River, a monumental burial mound is located nearby today's church at Bergset, where there previously had been several large grave mounds. This area was an important place in the valley in the Iron Age and it became a church site in the Middle Ages. In this obviously Norse context, it is interesting that a medieval drum hammer was found, which is a typical object of

Saami religious practice. These powerful symbols have elements of both Norse and Saami cultures demonstrating the continuity of cult and religious practices, and we may infer that Bergset was a place of some importance.

The funnel-shaped reindeer trapping system in Engerdal is complex, extensive, and stretches between the hills of Storhøa (highest point 1139 m above sea level) and Buhøgda (highest point 1128 m), which surround a valley named Tuvflået. Moreover, the system extends south towards a peak named Simlehøgda, suggesting the presence of reindeer (No.: *simle* – the female reindeer). The mountain area is located north-west of Heggeriset and Lake Engeren in the south-western part of the municipality.

This huge system consists of multiple fences, several kilometres long. The fences are made of upright stones, small cairns, and possible postholes, and several hunting-blinds and meat stores are connected to the system (Figure 1.5). No enclosures have been found, but it is possible that the fences would have terminated in enclosures built with wooden stakes. The system was previously mapped by E. Barth and S. Barth, who also found a possible burial mound in the valley of Tuvflået (Barth and Barth 1981: 268). Mapping of additional elements of the system by the archaeologist Kjetil Skare of Hedmark County in recent years, as well as the authors' own observations in 2013, shows a more extensive and complex construction than that surveyed by Barth (Skare, pers. comm. 2019).

Figure 1.5: Part of the funnel shaped reindeer trapping system at Storhøa – Buhøgda, Engerdal. The raised stones are visible remains of one of the many fences. (Photo: NIKU 2013.)

In the Lerådalen valley, north of the large trapping system, there is a row of pitfalls that appears to have been used for both elk and reindeer (Barth and Barth 1986a; Bergstøl 2008: 115). At the peak named Røskalhøgda, about a mile northeast of Storhøa – Buhøgda, an arrowhead of Wegraeus' type B was found. This is a type that, as mentioned above, is found in Saami contexts (Zachrisson 1997: 68–69, 212–213; Bergstøl 2008: 115, 202).

Further north, a Viking Age male burial is located by Lake Fjellgutusjøen. The burial contained a sword, axe, arrow, knife, a penannular brooch, and a whetstone. The items are of Norse types, with one exception. The penannular brooch is of an eastern style and is known from Saami contexts, from both burials and hoards, such as in the Vivallen cemetery in Härjedalen (Zachrisson 1997: 61–65; Bergstøl 2008: 115). Combinations of both Norse and Saami elements are a characteristic feature of burials in the outfields in both Norway and Sweden (Gollwitzer 1997; Bergstøl 1997, 2008). None of these finds can be directly linked to the trapping system at Storhøa – Buhøgda, but the material indicates Saami presence elsewhere in Engerdal.

1.6 Summary of the Hedmark systems

As described above, the three Hedmark systems differ in type and character. The constructions in Alvdal and Rendalen are both located in the high mountains, while the system in Engerdal is built on gentle heights that surround a wide valley in open terrain. Furthermore, the Engerdal system diverges from the other two by its sheer extent, as the systems in Rendalen and Alvdal are much smaller and less complex. At the same time, there are differences in the construction between those two systems too. The system in Alvdal is mainly constructed with solid fences of laid stones leading toward the enclosure. The system in Rendalen contains rows of raised stones in addition to postholes, indicating that a wooden construction was part of the fences. In this respect, the system in Rendalen has the greatest similarity to the Engerdal system, where rows of raised stones and probable postholes are the characteristic features. Another difference between the systems in Alvdal and Rendalen is that in Alvdal the enclosure is located on a ridge with the fences extending upslope in the terrain, while in Rendalen the fences lead downhill towards the lower lying enclosure. In both cases, there are steep climbs before the constrictions of the fences. The fences in Engerdal are, like the other two systems, facing up and over the hills, and the narrowest parts were out of sight of the reindeer. Unlike the systems in Engerdal and Alvdal, no hunting-blinds are known close to the Rendalen system.

1.7 The difficult question of dating

In Hedmark, many pitfall trapping systems located in the forests and in the transition zones between forests and mountains, and up to the high mountains, were in use during the Iron Age and into the Middle Ages. However, some systems also date back to the Neolithic and the Bronze Age (Gustafson 2007). There are two main types: pitfalls for elk in the forests and pitfalls for reindeer in the mountains. Mostly, the pitfalls were organized in large systems blocking choke points where herds of animals migrated and represent traces of well-organized hunting activities (Bergstøl 1997, 2008; Holseng 2004; Mathiesen 2005a, 2005b; T. Amundsen 2007; Spångberg 2014).

Compared to the systems described above, there have been few archaeological surveys of funnel-shaped reindeer trapping systems in Hedmark, and their dating time frames are generally problematic. It is assumed that the systems were probably in use during the Iron Age and the Middle Ages, and perhaps even into post-medieval times. The features of the three Hedmark systems indicate several periods of use, which is demonstrated in their construction, where different elements can run parallel to each other and partly overlap. Much effort was put into constructing and maintaining the systems, but their reuse and their long periods of use make it difficult to determine their exact dating. It is also possible that the hunting techniques used with the trapping system developed farther back in time.

Archaeological surveys and dating of funnel-shaped reindeer trapping systems have been carried out in the neighbouring county of Oppland, producing Viking Age and medieval results. These are partly based on radiocarbon dates from the systems as well as from nearby house sites, and heaps of bones and antlers (E. Barth 1977, 1996; Mikkelsen 1994; A. Fossum 1996: 51–57, 123; Hole 2013; Jordhøy 2013; Solli 2018a, 2018b). In recent years, melting glaciers in Oppland have allowed large-scale archaeological investigations with the recovery of spectacular artefacts from earlier reindeer hunting (Pilø et al. 2018), but this topic is not discussed further here.

From the three Hedmark systems, only one single radiocarbon date has been produced, and this is from the construction in Alvdal, dated to the late Viking Age. As mentioned above, this date must be considered somewhat uncertain, because of the methodology of collection used at that time. However, the system is clearly a result of at least two different units or contexts; the two single pitfalls, and the funnel-shaped system with its enclosure and fences. According to E. Barth (1977) and Hole (2013), the funnel-shaped system is the oldest, while the single pitfalls were constructed later. Moreover, Barth argues that the funnel-shaped system and the hunting-blinds are most probably several thousand years old. Furthermore, he claims that stone from the funnel-shaped system was reused to build the one single pitfall (E. Barth 1977: 70–71). Hole divided the funnel-shaped reindeer trapping systems into three phases and the system in Alvdal belongs to the oldest category based on its construction, with a small enclosure and its location in narrow terrain (Hole 2013: 42–43, 78–79). In the authors' opinion, it is not obvious that the funnel-shaped system is the oldest and the single pitfalls youngest, and it is equally likely to be the reverse (Amundsen and Os 2015).

No dating has been carried out within the systems in Rendalen and Engerdal, but according to Barth and Barth (1981: 269), the structure and function of the Engerdal system seems to be very old, perhaps several thousand years. However, there is no major argument for such a dating, and it stands unchallenged until there is an opportunity for future research.

1.8 Saami or Norse reindeer hunting in the Iron Ages and the Middle Ages

The geographical distinction between pitfalls for elk in the forests and pitfalls for reindeer in the mountains has been discussed in relation to Saami and Norse hunters in both northern and southern Norwegian research. The pitfalls for reindeer were regarded as constructions made by a Saami population, while those for elk were defined as Norse (A. Fossum 1996: 16, 31, with references). This is no longer accurate or appropriate. Recent research into prehistoric hunting, as well into ethnicity, and the often difficult and ambiguous question of ethnic attribution in relation to past material cultures, has made us realise that the conditions and relationships are much more complex than previously thought.

Regarding the funnel-shaped reindeer trapping systems, differences in the interpretation of ethnicity between a northern and a southern research tradition was pointed out early by the ethnographer Ørnulv Vorren (1916–2007):

> *Whereas in the north, for example, one feels that one is working with a clearly and unequivocally Lapp culture-element; when one goes south one is automatically confronted with the question as to whether this is a manifestation of Scandinavian or Lapp culture* (Vorren 1965: 535–536).

This reflection by Vorren is interesting, but the issue has not been further addressed in recent years. It is still common today to ascribe those systems located in northern Norway to a Saami population, but the cultural or ethnic affiliation of this kind of hunting technique is little questioned in the

research of the archaeology of southern Norway. Saami groups in the eastern and southern parts of Norway are mentioned in the early medieval Christian laws, such as the Eidsivating and Borgarting Laws (Hansen and Olsen 2004; Bergstøl 2008: 147). Although hunting and trapping are generally regulated by medieval laws, funnel-shaped reindeer trapping systems are not specifically mentioned (Solli 2018a: 19–21).

In Northern Hedmark, some written sources make explicit reference to Saami settlement from the 17th century onwards (Bergsland 1992; Fjellheim 1999; Gjermundsen et al. 2011), (see below). In Engerdal and Røros there is a Saami population today, where several families are occupied with reindeer husbandry as their livelihood.

Saami prehistory as a separate field of study was established in the 1980s, with the University of Tromsø leading the research (e.g. Kleppe 1977; Odner 1983; Olsen 1984, 1985, 1991; Schanche and Olsen 1985). Traditionally, the relationship between Saami and Norse cultures is emphasised more in the archaeology and history of northern Norway compared with the similar studies in southern Norway (Hesjedal 2001, 2004; Hansen and Olsen 2004), with some exceptions (Fredriksen 1983, overview in Zachrisson 1997: 9–20). In recent years, research has been conducted based on such cultural questions in the inland areas, such as Hedmark and Oppland (e.g. Bergstøl 2004, 2008; Bergstøl and Reitan 2008; H. Amundsen 2011, 2017a, 2017b; Byggstøyl 2012). In the Swedish northern landscapes and inland areas, the cultural historical situation is comparable, and related studies have been carried out (e.g. Mulk 1994; Zachrisson 1997, 2012; Bolin 1999; Price 2002; Forsberg 2005; B. Fossum 2006; Hagström 2010).

In both Oppland and Hedmark, there is evidence of early Saami presence in several places. Dwellings are of importance. In 2006, a Saami site dated to the late Merovingian Period and the Viking Age was uncovered by Lake Aursjøen, Lesja, in the northern part of Gudbrandsdalen (Bergstøl and Reitan 2008). Previously, three house sites from the late Middle Ages were investigated in the valley of Innerdalen, Kvikne, in the north-western part of Hedmark (Gustafson 1988). These dwellings were similar to a particular type of Saami houses (No.: *stallotuft*) in northern Norway (Bergstøl 2008: 224–225). The settlements at Aursjøen and Innerdalen illustrate the existence of Saami societies with a hunting economy in the region in those early periods. Further remains of Saami houses (No.: *gamme*) are found in other places as well (Bergstøl 2008; Hildre 2012).

In his publications, Edvard K. Barth (1977, 1996) focussed on the construction of the funnel-shaped reindeer trapping systems, hunting techniques, dating, and partly on settlement history. He pointed out the comparison between the systems in the mountains of Rondane and the Saami's *vuopman* system, due to similarities in the converging fences. He also stated that the dating of the southern Norwegian systems was considerably older (E. Barth 1977: 48, see also A. Fossum 1996: 64–67), but without further evidence, as mentioned above.

In the 1980s, the archaeologist Egil Mikkelsen (1994) examined a large funnel-shaped reindeer trapping system at *Einsethø*, with nearby house sites at the place named Tøftom in the valley of Grimsdalen, located within the mountain massif of Dovre in Oppland. The trapping system is dated between AD 1000–1300, i.e. to the late Viking Age and the Middle Ages. Mikkelsen discussed whether the system could be linked to Saami hunting specialists in the service of the King. His reasoning for this is the resemblance of this system to similar ones in Finnmark in northern Norway as well as the story in *Heimskringla*, the saga of the Norwegian Kings, written in the 1220s, about King Harald Hårfagre and his meeting with the Saami King Svåse and his daughter Snøfrid at the royal farm named Tofte in Dovre. In the saga the Norwegian King and the Saami woman marry. Mikkelsen's main conclusion is that the farmers from the village operated the trapping system as part of their seasonal outland exploitation. Further, he argues that the distribution and the surplus of the hunt were controlled by the King's authority (Mikkelsen 1994, see also Bergstøl 2008: 218; Bergstøl and Reitan 2008: 21; Stene 2011; Hole 2013: 85–87).

Mikkelsen (1994) related the funnel-shaped trapping systems to an early market economy, to political and power groupings with chiefs and kings, and later to the church. Many reindeer were slaughtered at that time in those systems, far beyond local needs. Reindeer products were distributed from the mountains to markets and cities in Norway and generally in Scandinavia, as the demand for leather, bones, probably also dried meat, and antlers (used in the production of combs and knives) was high (Christensen 1986). Objects of antlers from archaeological excavations in medieval cities are evidence of this form of network and commerce.

In the northern part of Hedmark, Bergset and neighbouring places in Rendalen, like Unset and Elvål, stand out because of the symbolic objects and cultural monuments of both Norse and Saami character described above. Bergset is a modern form of the ancient name Birkisetr, *birk-* being a term for trading and early towns from the Viking Age and onwards. The place later developed into a site of jurisdiction, and a church was built here in the medieval period. The pilgrimage road towards the cathedral of Nidaros in Trondheim also went through Birkisetr. Given the extensive hunting of reindeer in the surrounding mountains, it is likely that hunting products were traded at Birkisetr, from where goods were transported to larger markets and cities (Bergstøl 2008: 216). Worth noting is also the place Koppang in the neighbouring municipality of Stor-Elvdal, where there was another church site and marketplace in the Middle Ages, and it is possible that there was interaction and exchange between the two centres.

The historian Sverre Fjellheim (2005, 2012) indicates that the funnel-shaped reindeer trapping systems with enclosures have clear parallels with the enclosures in Saami reindeer husbandry. He argues for continuity between these constructions and economies. Specifically, Fjellheim pointed to a large funnel-shaped reindeer trapping system at the place named Verket in Lesja, northern Gudbrandsdalen in Oppland (see also Einbu 2005: 51–57; Solli 2018a, 2018b). According to Fjellheim (2005: 25–29; 2012: 12–13) it is likely that the Saami operated those systems in southern Norway in the Viking Age and the Middle Ages, as they were settled in the region at this time.

In discussing the archaeology of southern Norway, the archaeologist Jostein Bergstøl (2008) questions whether hunting of large animals in Northern Hedmark is linked to a Saami population, along with, or in parallel to hunting activities of the Norse. He points out that in general the ethnic situation is complex, because the different hunting systems were in use for a long period of time (Bergstøl 2008: 152–156). The funnel-shaped reindeer trapping system, with the use of enclosures and long fences, represents an important distinction from the hunt using pitfalls. Moreover, the change makes it far easier to establish a herd of domestic reindeer, i.e. regarding the process of transition from hunting of wild reindeer to later domestic herding (Bergstøl 2008: 213–215 with references, see also Fjellheim 2005: 22 and Bergstøl, this volume).

In his master's degree concerning the funnel-shaped reindeer trapping systems in Gudbrandsdalen, Hole (2013) raises the question of Saami operations in the region. He suggests that the Saami may be responsible for some of the smaller systems in the region, but he points out the large differences between them and the systems in Finnmark. According to Hole, this may be due to the geographical distances as well as the differences between Saami culture of the south and that in the north. He also refers to archaeological sites of Norse character in close association with some of the trapping systems, such as house sites (Hole 2013: 71–72, see also discussion of the ethnic affiliation of the trapping systems in Oppland in Hildre 2012: 13–18).

1.9 Saami and Norse in the post-medieval period

Written sources, images and narratives verify Saami presence in the post-medieval period in northern Hedmark. The documents describe conflicts with nearby Norse settlements in relation to resources and other issues. In daily life, it was probably a more peaceful coexistence, while conflicts were noted in the documentary record. Moreover, the material traces of Saami in the landscape are numerous, such as house remains, hearths, and pits for the preservation of meat and milk, etc.

Three documents describe the cultural situation in northern Hedmark. The first written source mentioning the Saami is dated to 1643 and documents the complaint by the people at Tynset, on behalf of the whole valley of Østerdalen, about Saami groups in the mountains and forests killing and destroying everything they come across, like elk, reindeer, beaver, and birds (Bergsland 1992, appendix 2; Fjellheim 1999: 18–19).

Another document from 1663 refers to the Saami Nils Mortensen from Tynset, who accused 15 farmers in the area for false accusation. The farmers blamed the Saami for illegal hunting in their forests throughout the year. In order to chase the Saami away, the farmers stole 100 reindeer, but the Saami brought them back at night (for a more comprehensive retelling of the story, see Bergsland 1992: 54; Fjellheim 1999: 38–40).

In the third document, also from 1663, the bailiff (No.: *fogd*) sued two farmers from the place Vingelen for theft from the Saami. The case was postponed in order to get the names of the other people involved, a total of twelve farmers. In their defence, the farmers accused the Saami of hunting in the forests. In one case, the farmers found a group of Saami at Buhø (Buhøgda by Lake Femunden), where they had 30 sleighs loaded with reindeer meat and three skins of elk and were on their way to trade with some charcoal burners who sold charcoal in the mining town of Røros. Moreover, the Saami were found by Lake Siksjøen, where they had dwellings and storage rooms (No.: *stabbur*). In connection with this event, it emerged that the Saami Torkil Mortensen had built a place in the mountain of Hommelfjell, but that he did not live there. On this occasion, a large Saami settlement area (*sijte*) in Østerdalen is mentioned, with five families who owned a herd of 600 domestic reindeer (Fjellheim 1999: 39–41).

The hunting activities of the Saami in areas that were regarded as land belonging to farmers are a common theme in these documents. One reason for the conflicts could have been the changes in Saami settlement patterns at the time. Previously, their nomadic way of life led to them hunting over large areas and at different times of the year. The transition to reindeer husbandry resulted in increasing settlement with the hunting activities of both Saami and farmers largely taking place in the same areas, resulting in pressure on the resources near the settlements.

Of importance in this context, is the fact that one of the documents from 1663 indicates that slaughtering of wild reindeer occurred in connection with the transition to domestic reindeer husbandry. An intentional reduction of the wild reindeer population would most likely have led to systematic hunting operations over large areas. In this respect, the report of the Saami with 30 sleighs loaded with reindeer meat is interesting. According to Fjellheim, the overall loading capacity of the sleighs were approx. 90 reindeer carcasses. Furthermore, carrying meat on sledges indicates that hunting of wild reindeer had taken place, otherwise it would have been more practical to herd domestic reindeer to their destination (Fjellheim 1999: 42–46). Furthermore, 90 wild reindeer is a significant number, and it is likely that funnel-shaped trapping systems were used for the hunting of such large numbers of animals. Written documents from Finnmark refer to large-scale hunting of wild reindeer until the 18th century, which also had an economic impact with trading of the reindeer products, referred to above.

The documentary sources indicate that Saami groups were well-established in some areas and were carrying out domestic reindeer husbandry. At the same time, the hunting of wild animals continued. According to Fjellheim (2012), the transition from an economy of hunting to the domestic reindeer husbandry was a process that took place over a long period of time, and in various ways in different areas. Moreover, this development offered greater opportunities for trading. In particular, the establishment of the copper mining industry at the nearby town Røros (in operation between 1644 and 1977) had an enormous impact on the Saami and led to the establishment of trade in reindeer products (Fjellheim 2012: 21–33).

1.10 The difficult question of ethnicity

Ethnicity should be understood as an expression of processes that develop as result of the meeting between different cultures (F. Barth 1969). In the field of archaeology, it is understood that the relationship between past material cultures and ethnicity is complex and often unpredictable, because material culture is used and understood in different ways by different peoples (H. Amundsen 2017a: 179–181 with references). In this respect, the archaeological sites and artefacts in northern Hedmark reflect both similarities and differences between Norse and Saami cultures, and indicate meeting points as well as borders, and changes in relations over time. There is also possibly several mixed or hybrid forms between the two groups (Bergstøl 2004). The funnel-shaped reindeer trapping systems are a part of this diverse and the long history, or histories, of the area.

In 2015, the authors published a paper on the three trapping systems in Hedmark in the Norwegian journal *Heimen*, which included a discussion of the question of the ethnic relationship of this type of reindeer hunting (Amundsen and Os 2015). A year later, the Swedish historian Olof Holm published a critical comment on the paper in the same journal (Holm 2016a). He later elaborated his comments, where he emphasised his source-critical objections (Holm 2016b). This discussion is an example of the usual dispute in studies of the Saami past, including theories and methodologies, sources and source criticism.

Holm's (2016a) general opinion is that it is difficult to draw conclusions from sparse archaeological material. Moreover, he commented on the artefacts that we defined as Saami or possibly Saami, with an eastern origin, etc. He also questioned our references to the research on the topic. According to Holm, everyday tools, like weapons and brooches, are difficult to interpret as ethnic markers. He considers house sites and artefacts belonging to the religious realm as more certain ethnic markers, like the dwelling at Lake Aursjøen and the medieval drum hammer from Rendalen.

Indeed, Holm raised interesting and relevant questions to our study, but we were critical of his approach, and had the opportunity to make a reply in the same journal (Amundsen and Os 2016). We do not agree with Holm in his assertion that 'everyday' tools are difficult (by definition) to interpret as ethnic markers. In our opinion, tools like points, spears, scrapers, and jewellery such as brooches and necklaces, are as important as, for example, house sites and religious items. Artefacts may be closely related to, and sometimes even exclusive to, groups of people. This may include items connected to the group's own craft traditions as well as objects related to the group's way of life. To put it simply, agricultural equipment is not found in hunter groups, nor is there usually a widespread use of hunting weaponry in agricultural communities. Moreover, 'everyday' material might be from contexts of cultural significance, like burials and hoards.

The fact that a few Saami objects have been found in northern Hedmark and that their dating extends over a long period of time cannot be used as an argument for the lack of Saami settlement in the area. In this study we have emphasised the possible relationship between the trapping systems

and both Saami and Norse material in the surrounding areas. We have chosen to highlight the Saami artefacts, or possible Saami artefacts, presented above, and at the same time we have referred to the documented Norse history of the area. It has not been possible to study and discuss the artefacts in more depth here, as our focus has been the trapping systems.

1.11 Summary

The funnel-shaped reindeer trapping systems vary in size and type, and this variation is highlighted by the three different systems in Hedmark. Adaptation to the local terrain and the actual movements of the reindeer are contributing factors to those differences. The hunting methods employed were functional and efficient, and at the same time complex. Much planning and organisation, collaboration and transfer of knowledge were necessary to run the systems.

It is most likely that the Hedmark systems were in use during the Iron Age and the Middle Ages, and probably into the post-medieval period as well. At what times within these periods the trapping systems were used, and to what extent, is difficult to answer due to lack of dating and closer archaeological and documentary investigation. This includes other contexts that may be linked to the hunting activities, like house sites and pits with waste from slaughtering. It is most likely that the systems were in use for several periods, and at times they may have been abandoned.

Many finds such as burial mounds, fossilised agricultural fields, and artefacts that are connected to trapping systems in the wider Hedmark region, indicate established Norse communities during the Iron Age and the Middle Ages. At the same time, a varied Saami culture is known from both settlements and artefacts. In Rendalen especially, Saami discoveries are numerous, with the drum hammer from the early Middle Age being the most spectacular. Saami as a separate ethnic group are referred to in written documents from northern Hedmark in the 17th century, in relation to conflicts about the hunting grounds and in relation to transporting and trading of reindeer products.

Another argument that has been proposed for a Saami connection to the funnel-shaped trapping systems is that the construction is the same as the fenced systems in the later domestic reindeer industry. In order to prevent the loss of domestic reindeer, intentional slaughtering of the herds of wild reindeer may have been carried out in this southern region, as in the north in Finnmark. There is a distinct possibility that the funnel-shaped systems were used for this kind of activity.

It is important to explore and develop the issues concerning cultural identity in studies of past hunting communities in Norway. In future investigations of the funnel-shaped reindeer trapping systems in the southern mountain regions, not only are dating and recording important to undertake, but also questions of identity must be asked. The relationship of Saami and Norse cultures should be further discussed, and the question of to what extent the two groups may have interacted in the hunting activities should be addressed. It will also be interesting to study the similarities and differences between the design and organisation of the trapping systems between southern and northern Norway. In this kind of studies, the development of a consistent terminology will be essential.

Acknowledgements

Thanks to the local inhabitants in Alvdal, Rendalen, and Engerdal, who have made it possible to study this material. We would also like to thank **Beverley Ballin Smith** *for her help with the English language. Finally, thanks to the anonymous reviewers for their constructive comments on the text.*

Bibliography

Amundsen, H. R. 2011. *Mot de store kulturtradisjonene. Endringsprosesser fra tidligneolitikum til førromersk jernalder mellom Mjøsa og Femunden*. Unpublished PhD thesis. Oslo: University of Oslo.

Amundsen, H. R. 2017a. Changing histories and ethnicities in a Sámi and Norse borderland. *Acta Borealia* 34(2): 178–197.

Amundsen, H. R. 2017b. Different Bronze Ages – The emergence of diverging cultural traditions in the southern inland, Norway. In S. Bergerbrant and A. Wessman (eds.): *New Perspectives of the Bronze Age: proceedings of the 13th Nordic Bronze Age Symposium held in Gothenburg 9th to 13th June 2015*, pp. 335–345. Oxford: Archaeopress.

Amundsen, H. R. and K. Os, 2015. Ruseformete massefangstanlegg for villrein i nordre Hedmark – Samiske eller norrøne tradisjoner? *Heimen* 52(1): 41–53.

Amundsen, H. R. and K. Os, 2016. Kommentar til Olof Holm. Materiell kultur och samisk etnicitet. En källkritisk kommentar till Hilde Rigmor Amundsen og Kristin Os. *Heimen* 53(1): 97–101.

Amundsen, T. (ed.) 2007. *Elgfangst og bosetning i Gråfjellområdet*. Gråfjellprosjektet Bind II. Varia 64. Oslo: Museum of Cultural History.

Barth, E. K. 1977. Anlegg for massefangst av villrein i Rondaneområdet. *Norsk Skogmuseums Årbok* 8(1976−1977): 9–74.

Barth, E. K. 1996. *Fangstanlegg for rein, gammel virksomhet og tradisjon i Rondane.* NINA-NIKU 1996.Trondheim: Stiftelsen for naturforskning og kulturminneforskning.

Barth, S. and E. K. Barth, 1981. Fangstanlegg for rein på Storhøa i Engerdal. *Norsk Skogmuseums Årbok* 9(978-1981): 260–271.

Barth, S. and E. K. Barth, 1986a. Fangstgraver i Engerdals Vestfjell. *Norsk Skogmuseums Årbok* 11(1985−1986): 189–208.

Barth, S. and E. K. Barth, 1986b. *Rester av to fangstanlegg nær Rendals-Sølen*. Statskog 3 (1986).

Barth, F. 1969. Introduction. In F. Barth (ed.): *Ethnic Groups and Boundaries. The Social Organization of Culture Difference*, pp. 9–38. Oslo: Universitetsforlaget.

Bergsland, K. 1992. *Bidrag til sydsamenes historie*. Senter for samiske studier 1. Tromsø: Universitetet i Tromsø.

Bergstøl, J. 1997. *Fangstfolk og bønder i Østerdal*en. *Rapport fra Rødsmoprosjektets delprosjekt Marginal bosetning*. Varia 42. Oslo: Universitetets Oldsaksamling.

Bergstøl, J. 2004. Creoles in Iron Age Norway? In S. E. Hakenbeck and S. G. Matthews (eds.): *Reconsidering Ethnicity. Material Culture and Identity in the Past*, pp. 7–24. Archaeological Review from Cambridge 19:2. Cambridge: Archaeological review from Cambridge.

Bergstøl, J. 2008. *Samer i Østerdalen? En studie av etnisitet i jernalderen og middelalderen i det nordøstre Hedmark*. Acta humaniora 325. Oslo: University of Oslo.

Bergstøl, J. and G. Reitan, 2008. Samer på Dovrefjell i vikingtiden. Et bidrag til debatten omkring samenes sørgrense i forhistorisk tid. *Historisk tidsskrift* 87(1): 9–27.

Bolin, H. 1999. *Kulturlandskapets korsvägar. Mellersta Norrland under de två sista årtusendena f.Kr*. Stockholm Studies in Archaeology 19. Stockholm: Stockholm University.

Byggstøyl, I. 2012. *Fangstmarksgraver i Hedmark. En analyse av kulturelle markører i gravmateriale og gravform.* Unpublished MA-thesis. Oslo: University of Oslo.

Christensen, A. E. 1986. Reinjeger og kammaker, en forhistorisk yrkeskombinasjon? *Viking* XLIX: 113–133.

Eggset, A. 1970. *Dyregraver for elg og rein*. Unpublished thesis. Alvdal.

Einbu, T. 2005. Verket på Slådalen i Lesja. Årsskrift for Lesja historielag 2005: 38–63.

Fellman, J. 1903/06. *Anteckningar under min vistelse i Lappmarken*. Bd. I–IV. Helsingfors: Finska Litteratursällskapet.

Fjellheim, S. 1999. *Samer i Rørostraktene*. Snåsa: Fjellheim.

Fjellheim, S. 2005. Fra fangstbasert til nomadisk reindrift i Rørostraktene. *Rangifer* 10: 21–30.

Fjellheim, S. 2012. *Gåebrien sijte – En sameby i Rørostraktene*. Røros: Fjellheim.

Forsberg, L. 2005. Protosamiska och samiska boplatser i Norrland under tidig metalltid – Några tolkningsförslag. In K. A. Bergsvik and A. Engevik (eds.): *Fra funn til samfunn. Jernalderstudier tilegnet Bergljot Solberg på 70-årsdagen*. Universitetet i Bergen Arkeologiske Skrifter 1, pp. 121–151. Bergen: University of Bergen.

Fossum, A. 1996. *Vikingtids jakt og fangst på rein i Nord-Gudbrandsdal. Var de alle menn?* Lom: Norsk Fjellmuseum.

Fossum, B. 2006. *Förfädernas land. En arkeologisk studie av rituella lämningar i Sàpmi, 300 f.Kr.–1600 e.Kr*. Studia Archaeologica Universitatis Umensis 22. Umeå: Umeå University.

Fredriksen, G.1983. Samer i Trysil? *Nicolay* 41: 29–36.

Fretheim, S. E. 2002. *Steinalderminner i Alvdal Vestfjell. Utsnitt av livsmønstre gjennom 6500 år.* Unpublished MA-thesis. Trondheim: Norwegian University of Science and Technology.

Fuglesang, S. H, 1980. *Some aspects of the Ringerike Style. A phase of 11th century Scandinavian art*. Mediaeval Scandinavia supplements 1. Odense: Odense University Press.

Gjerde, Skalleberg, H. 2010. Tilfeldig? Neppe. Finsk-ugriske smykker i Sør-Norge. *Viking* LXXIII: 49–60.

Gjerde, Skalleberg, H. 2016. *Sørsamisk eller førsamisk? Arkeologi og sørsamisk forhistorie i Sør-Norge - en kildekritisk analyse*. PhD thesis. Oslo: Museum of Cultural History.

Gjermundsen, J. O, A. Haugen Steinbakken, and T. Sørensen, 2011. *Tolga og Os gjennom tidene. Fra steinalder til om lag 1840.* Os: Utgitt av Tolga og Os kommuner.

Gjessing, G. 1945. To hamrer til samiske runebommer. In K. Nielsen (ed.): *Festskrift til Konrad Nielsen på 70-årsdagen 28 august 1945*, pp. 99–115. Studia Septentrionalia 2. Oslo: Brøgger.

Gollwitzer, M. 1997. Yngre järnålder i fjälltrakterna. In I. Zachrisson (ed.): *Möten i gränsland. Samer och germaner i Mellanskandinavien*. Monographs 4, pp. 27–33. Stockholm: Statens Historiska Museum.

Gustafson, L. 1988. Hvem drev elgfangst i Innerdalen i seinmiddelalderen? In K. Julku (ed.): *Nordkalotten i en skiftande värld – Kulturer utan gränser och stater över gränser. Tredje nordiska symposiet om Nordskandinaviens historia och kultur*, pp. 39–61. Studia Historica Septentrionalia 14:2. Rovaniemi: Pohjois-Suomen Historiallinen Yhdistys.

Gustafson, L. 2007. Et elgfangstsystem i Snertingdal. Undersøkelse av sperregjerde. In I. Ystgaard and T. Heibreen (eds.): *Arkeologiske undersøkelser 2001−2002*, pp. 157–172. Varia 62. Oslo: Museum of Cultural History.

Hagström, S. Y, 2010. *I gränslandet mellan svenskt och samiskt: Identitetsdiskurser och förhistorien i Norrland från 1870-tal till 2000-tal*. Occasional papers in archaeology 52. Uppsala: Uppsala University.

Hansen, L. I. and B. Olsen, 2004. *Samenes historie fram til 1750*. Oslo: Cappelen Akademisk Forlag.

Hesjedal, A. 2001. *Samisk forhistorie i norsk arkeologi 1900−2000*. Stensilserie B 63. Tromsø: University of Tromsø.

Hesjedal, A. 2004. Vinterlandet Norge. Om hvordan samisk forhistorie har blitt usynliggjort i norsk arkeologi. In M. Krogh. and K. Schanche (eds.): *Samisk forhistorie. Rapport fra konferanse i Lakselv 5.−6 September 2002*, pp. 7–19. Varanger Samiske Museers Skrifter 1. Varangerbotn: Varanger Samiske Museum.

Hildre, N. 2012. *På sporet av samiske kulturminner i Oppland. FoU-rapport*. Kulturhistorisk serie 2012:2. Lillehammer: Oppland.

Hole, R. 2013. *Massefangstanlegg for villrein. Ei studie av sosial kontekst basert på romlege og kronologiske variablar*. MA-thesis. Trondheim: Norwegian University of Science and Technology.

Hole, R. and R. Sørumgård, 2013. Fangstsystemet i Gravskardet. *Villreinen* 2013: 60–62.

Holm, O. 2016a. Materiell kultur och samisk etnicitet: En källkritisk kommentar till Hilde Rigmor Amundsen og Kristin Os. *Heimen* 53(1): 93–95.

Holm, O. 2016b. Materiell kultur och samisk etnicitet. Replik till Hilde Rigmor Amundsen og Kristin Os. *Heimen* 53(2): 227–230.

Holseng, O. T. 2004. *Et fangstgropsystem i Orvdalen, Rendalen. Kulturhistorisk kontekst belyst ut fra dateringsproblematikk.* Unpublished MA-thesis. Trondheim: Norwegian University of Science and Technology.

Jordhøy, P. 2012. *Gamal villreinfangst i Rondane. Dei store fangstgroprekkene i høve til villreintrekk og beite*. NINA report 872. Trondheim: Norsk institutt for naturforskning.

Jordhøy, P. 2013. *Rondane. Fjellfolk og villrein*. Lesja: Snøhetta forlag.

Kleppe, E. Johansen, 1977. Archaeological material and ethnic identification. A study of Lappish material from Varanger, Norway. *Norwegian Archaeological Review* 10(1−2): 32–46.

Leem, K. 1767. *Beskrivelse over Finnmarkens lapper*, *deres tungemaal, levemaade og forrige afgudsdyrkelse*. Copenhagen: G.G. Salikath.

Mathiesen, P. O. 2005a. Nord-Østerdalen – et fordums fangsteldorado. Årbok for Nord-Østerdalen 2005: 64–74.

Mathiesen, P. O. 2005b. Oppdagelser i Rendalens fjellverden og områdene vest for Femunden. *Villreinen* 2005: 16–23.

Mikkelsen, E. 1994. *Fangstprodukter i vikingtidens og middelalderens økonomi. Organiseringen av massefangst av villrein i Dovre*. Universitetets Oldsaksamlings skrifter 18. Oslo: Universitetets Oldsaksamling.

Mulk, I. M. 1994. *Sirkas: Ett samiskt fångstsamhälle i förändring Kr.f.−1600 e.Kr.* Studia archaeologica Universitatis Umensis 6. Umeå: Umeå University.

Nyeggen, H. 2005. *Kulturminner i utmarka i Alvdal*. Sollia and Oslo: Sollia forlag.

Odner, K. 1983. *Finner og terfinner. Etniske prosesser i det nordlige Fenno-Skandinavia*. Oslo Occasional Papers in Social Anthropology 9. Oslo: University of Oslo.

Olsen, B. 1984. *Stabilitet og endring. Produksjon og samfunn i Varanger 800 f.Kr.−1700 e.Kr.* Unpublished MA-thesis. Tromsø: University of Tromsø.

Olsen, B. 1985. Arkeologi og etnisitet. Et teoretisk og empirisk bidrag. In J. R. Næss (ed.): *Arkeologi og etnisitet*, pp. 21–25. AmS-Varia 15. Stavanger: University of Stavanger.

Olsen, B. 1991. Kjelmøyfunnenes (virknings-)historie og arkeologi. *Viking* LIV: 65–87.

Pareli, L. 1991. Runebommehammeren fra Rendalen – Et minne etter samer i Sør-Norge i middelalderen? *Åarjel-saemieh* 4: 21–24.

Pilø, L. H., E. Finstad, C. B. Ramsey, J. R. P. Martinsen, A. Nesje, B. Solli, V. Wangen, M. Callanan, and J. H. Barrett, 2018. The chronology of reindeer hunting on Norway's highest ice patches. *Royal Society Open Science* 5(171738): 1–10.

Price, N. 2002. *The Viking way. Religion and war in late Iron Age Scandinavia*. Aun 31. Uppsala: Uppsala University.

Rygh, O. 1885. *Norske Oldsager*. Christiania: Cammermeyer.

Schanche, A. and B. Olsen, 1985. Var de alle nordmenn? En etnopolitisk kritikk av norsk arkeologi. In J. R. Næss (ed.): *Arkeologi og etnisitet*, pp. 87–99. AmS-Varia 15. Stavanger: University of Stavanger.

Skjølsvold, A. 1980. Refleksjoner omkring jernaldergravene i sydnorske fjellstrøk. *Viking* XLIII: 140–160.

Skjølsvold, A. 1981. En tidlig romertids grav i Rendalsfjellene og noen tanker omkring den eldste jernalderbosetning i sydnorske innlandsstrøk. *Viking* XLIV: 5–33.

Spangen, M. 2010. Guder-makter-mennesker-ting. Om deponering av sølv som offer. *Viking* LXXIII: 61–80.

Spångberg, B. M, 2014. *Fangstens omfang og betydning i fjelltraktene. En studie av fangstgroper og fangstanlegg for rein i Rendalen og Engerdal, Hedmark*. Unpublished MA-thesis. Oslo: University of Oslo.

Stene, K. 2011. Utmarka – en 'arena' for samfunnsutvikling i middelalder. Massefangst av villrein og jernproduksjon i Øst-Norge. In A. Håkansson. and C. Rosen (eds.): *Landskaparna*. Stiftelsen Hallands länsmuseer 11, pp. 225–243. Halmstad: Kulturmiljö Halland.

Solli, B. 2018a. Reindeer Hunting, Materiality, Entanglement and Society in Norway. *Journal of Glacial Archaeology* 3(1): 1–26.

Solli, B. 2018b. Massefangstanlegget for rein på Verket – Litt om dei arkeologiske undersøkingane av massefangstanlegget for rein på Verket ved Slådalsvegen i 2018. Årbok, Lesja Historielag 2018: 74–80.

Sørensen, S. 1982. Ski og skibruk i Østerdalen. *Årbok fra Glomdalsmuseet* 1982: 62–94.

Tornæus, J. 1772 [1672]. *Beskrifning öfver Tornå och Kemi Lappmarker*. Stockholm: Kongl. Finska Boktryckeriet.

Vorren, Ø. 1965. Researches on wild reindeer catching constructions in the Norwegian Lapp area. In H. Hvarfner (ed.): *Hunting and Fishing. Nordic Symposium on Life in a Traditional Hunting and Fishing Milieu in Prehistoric Times and up to the Present Day. Luleå May 28th–June 1st 1962***,** pp. 513–536. Luleå: Norrbottens museum.

Vorren, Ø. 1998. *Villreinfangst i Varanger fram til 1600–1700-årene*. Tromsø museums skrifter 28. Tromsø: Nordkalott-Forlaget.

Wegraeus, E. 1971. *Vikingatida pilspetsar i Sverige. En förbisedd föremålsgrupp.* Licentiatavhandling. Uppsala: Uppsala University.

Zachrisson, I. 1984. *The Saami Metal Deposits A.D. 1000–1350 in the Light of the Find from Mörtträsket, Lapland*. Archaeology and Environment 3. Umeå: University of Umeå.

Zachrisson, I. 1997. *Möten i gränsland. Samer och germaner i Mellanskandinavien.* Monographs 4. Stockholm: Statens Historiska Museum.

Zachrisson, I. 2012. Samer i syd i gången tid – till Uppland och Oslotrakten i söder. Ny forskning från Norge och Sverige. In H. Tunón, M. Frändén, C.-G. Ojala, and M. B. Öhman (eds.): *Uppsala mitt i Sápmi: Rapport från ett symposium arrangerat av Föreningen för samiskrelaterad forskning i Uppsala, Upplandsmuseet 4–5 maj 2011.* CBM:s skriftserie 55, pp. 8–12. Uppsala: Centrum för biologisk mångfald.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

2
Hunting native reindeer, while herding imported ones? Some thoughts on the development of Saami pastoralism

Jostein Bergstøl*

Abstract

It has been commonly believed that Saami pastoralism developed from small-scale husbandry in the Iron Age, into large-scale intensive herding during the Late Middle Ages, but new genetic research suggests that the large, semi-tame herds were bred from imported animals, while they still kept hunting the native ones. Studies of aDNA of prehistoric reindeer during the last two decades have shown that the reindeer had two different immigration routes into Scandinavia after the Ice Age. In addition to that, researchers have seen another genetic marker in the domesticated reindeer, from around AD 1500. New published research suggests that this type has its origins in Northern Russia. This insight opens new perspectives and questions on the start and development of intensive reindeer herding. Did the Saami import a pastoral system together with the new animals, or is it still possible that Saami pastoralism developed here?

Excavations and surveys have revealed different types of mass trapping systems from the Iron Age and Middle Ages in Southern Norway. The later, funnel-shaped traps have striking similarities to the driving fences in modern reindeer herding. This article discuss the possibilities of influences from wild reindeer trapping and its relation to imported reindeer herds in Norway on the development of Saami pastoralism.

Keywords: Reindeer (*Rangifer tarandus*), aDNA, mass trapping systems, Saami, herding

2.1 Introduction

In 890 AD, Ohthere (No: Ottar), a chieftain from Hålogaland in northern Norway (Figure 2.1), visited King Alfred the Great in Wessex. Ohthere gives a description of the land of the North, the peoples, and the economy (Bately 2007). In his tale, there is one passage especially that has been used in discussions around reindeer domestication, pastoralism, and hunting/trapping. Ohthere claims to have 600 unsold reindeer and six tame ones (*stælhranas*). The latter were used as decoy animals and were considered very valuable among the Saami (Bately 2007:46).

* Museum of Cultural History, University of Oslo, jostein.bergstol@khm.uio.no

Figure 2.1: Regions and places mentions in the text. 1: Hålogaland, where Ohthere lived. 2: Mountains of Southern Norway with trapping systems. 3: Varanger peninsula. 4: Yamal peninsula. (Map: M. Samdal.)

The transition from hunters to pastoralists is among the most debated questions in Saami archaeology, and the tale of Ohthere has been a very important source of information. A key question is what the 600 animals were. In earlier translations, they were referred to as a herd of 600 semi-domesticated, herded animals, but most researchers now argue that Saami pastoralism developed around five centuries after Ohthere's visit to England (Hansen and Olsen 2004; Sommerseth 2009; Bjørklund 2013). Both Inger Storli and Ivar Bjørklund have pointed out that it is more likely the passage refers to wild animals waiting to be butchered and sold (Storli 1994:91; Bjørklund 2013:176). Storli believes that Ohthere kept wild reindeer pasturing on some of the islands in his home region (Storli 2007:94). The stælhranas may be interpreted as domesticated animals, as reflected in the Saami term boazu, and not necessarily just decoy animals (Bjørklund 2013). Decoy animals are linked specifically to the Saami people in the account of Ohthere. The 600 unsold animals are not, and may come from both Saami and Norse trapping. In this article, I will bring new results from genetic research on reindeer and from new studies of the development of trapping systems into the discussion around the emergence of Saami reindeer herding. Was the technology of large scale mass trapping in the mountains of Southern Norway in some way a model for the later Saami reindeer fences, and what role did the imported animals play in this development?

2.2 New genetic evidence

Ancient DNA analyses of reindeer bones have provided new data, leading to new questions that only a few years ago were unthinkable. During the last decades, geneticists have analysed mitochondrial DNA from both wild and domesticated reindeer in Fennoscandia. They have found that there are two genetic lines that can be followed back to the wild animals that arrived after the last Ice Age (Indrelid et al. 2007; Røed et al. 2011). In addition to these, a third line appears much later. This third cluster of haplotype groups is first seen in the material between 1400 and 1500 AD, in contexts affiliated with Saami pastoralism (Bjørnstad et al. 2012). New genetic studies have now revealed that "the mitochondrial genome in Finnmark reindeer underwent a massive genetic replacement since the medieval period, characterized by significant loss of historically native haplotypes and a significant introduction of new ones" (Røed et al. 2018: 283). The same studies suggest that the genetic material points towards an origin in northern Russia.

This does not mean that the Saami did not have domesticated animals before 1400 AD. Finds of Saami sledges going back to 1500 BC show that they had animals for transport, and maybe also for milking (Murashkin et al. 2016). However, when pastoralism was introduced in Fennoscandia, the DNA indicates that this was done with a new stock of animals brought into the region. The Saami did not build up herds from their own, domesticated animals. Nor did they use native, wild reindeer. The same genetic analysis has also shown that the native, wild reindeer population went through genetic bottlenecks, an indication that intensive hunting decimated the population. In the mountains of Southern Norway, the bottleneck can be seen from the 11th to12th centuries and in Finnmark after 1500 AD (Røed et al. 2014; Røed et al. 2018). The concurrence between the genetic bottleneck and new animals in northern Norway is an indication that there is a correlation between an increase in hunting and trapping, and the transition to pastoralism. In the following, I will carry out a brief overview of technological developments in the trapping systems for big game from the Stone Age to the Middle Ages.

2.3 Hunting and trapping of wild reindeer

The oldest form of hunting of reindeer is of course the bow and arrow. Sometime during the Mesolithic, the pitfall trap was invented (Bergstøl 2015a). The oldest dated examples in Scandinavia were made for catching elk, but the technology is the same for elk and reindeer, so it is safe to assume that they were used for both species.

Even single pitfalls had low leading fences made of stacked stones. These fences were not high. Just a double or triple layer of stones, normally not more than five meters in length, but sometimes up to 10 meters (Figure 2.1). The pitfalls measure about 1 x 2 meters inside, and they are nearly two meters deep. It may look like there are two types of pitfall; the ones made of stone, and the oval earth-pits, dug in sandy soils (Bang-Andersen 2009). Excavations of well-preserved oval pitfalls in sand, however, have shown that they were lined with an inner wooden construction, making them very similar to the stone-built ones (Bergstøl 2015b). I will argue that the local building material was the most important factor, since most of the stone-built pits lie above the tree line.

It was not until the late Viking Age and Middle Ages that the rows of pitfalls became really long, with up to a thousand pits in a single system (Vorren 1998; Hansen and Olsen 2004: 185-190; Solli 2018). These long rows block large seasonal migrations, like at Dovrefjell (Jordhøy 2007).

When new methods for trapping were developed, it did not mean that the old ones had to be abandoned. Hunting with bows and arrows existed parallel to pitfall trapping, and when new mass

trapping systems were developed into the final form in the Late Iron Age, trapping with pitfalls were still used. In many ways, one can say that the first mass traps for several animals were a development of the single pitfalls, like one located close to a large mass trapping system at Hardangervidda. This pitfall has long funnel shaped arms that led the animals into the short end of the rectangular pit (Figure 2.2). This feature is typical of the bigger mass traps. Normally, the pitfalls can catch animals from both directions, but in some cases they catch only from one. In the case of the pit in Figure 2.2, it lies in a migration route where thousands of animals pass every fall. It was constructed in the Viking period, and was abandoned in the middle ages (Bergstøl 2016). A pit like this is not very different from the smallest mass trapping systems. The common feature is that they have funnel shaped fences that lead the animals into the trap.

Figure 2.2: Pitfall with long fences. (Photo: J. Bergstøl.)

The archaeologist Runar Hole has documented and studied the development of mass trapping systems in his master's thesis (Hole 2013). All the known traps in the Dovrefjell/Rondane-region have been documented with GPS, and I will present them here (Figure 2.3), together with other known traps for reindeer from Southern Norway (Jordhøy 2007, 2012).

The trap called Storgrava in Rondane is similar to the pitfall, but the dimensions are greater (Figure 2.4). The inside measurements of the holding pen are 19 x 3 meters, and it could hold maybe as many as 50 animals. There are traces of posts near to the holding pen, and the area between the posts has been cleared of rocks, making it easier for the animals to go there. This type is what Runar Hole refers to as type 1. The biggest difference, apart from the size, between the pitfalls and the mass traps, is that the hunter had much better control of the game after it had entered the mass trap. The

pitfall catches animals randomly, and the hunters have no control over what animals they get, and if the animal is killed or not. In a trap like this, the animals was kept alive until they were butchered, or let go. The fences were made of both stones and posts, which were bigger and more solid the closer they were to the pen.

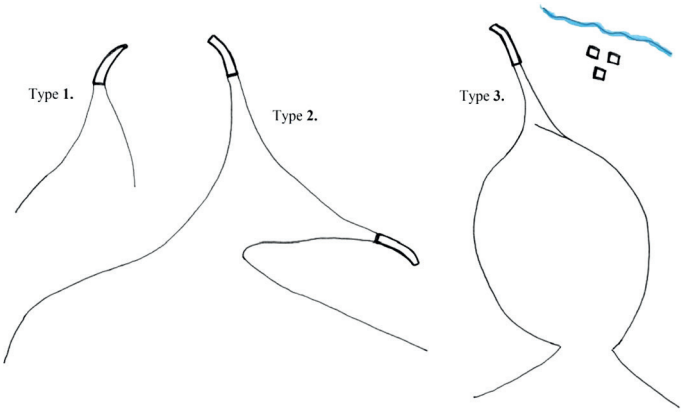


Figure 2.3: The three types of mass traps, as presented by Runar Hole. (Hole 2013, with permission).

Figure 2.4: The holding pen at Storgrava, a type 1-trap. (Photo: J. Bergstøl.)

Throughout the year, wild reindeer have different behaviour. In the summer, the bucks form separate herds, counting from a few up to as many as 100 animals, whereas the does and calves form larger herds. During the rutting season from around August, the bucks seek the does for mating, and by then some herds may count as many as 1000 animals.

The holding pens in the type 1-traps may take from 20 to maybe 50 animals if they are completely full, and I believe that it must have been frustrating for the hunters to see the majority of the animals escaping, just because the pen was full. This may have led to the development of type 2. This type is actually nothing more than one or two more pens to catch the animals escaping from the first. Animals that turned around, or were not caught in the first pen would be led into a second and sometimes into a third pen. The dimensions of this type are more or less the same as for type 1.

The third type is the really large systems, with arms stretching more than a kilometre. The reindeer were pushed into a holding fence that can hold hundreds of animals. The trap marked *h* in Figure 2.5 has two enclosures. First the holding fence, and then a small pen with very thick posts with small gaps in-between. This, the killing pen, ends in a narrow funnel, which can only hold one animal at a time. From this end, there is a deep trail leading to the butchering site, a few hundred meters away. There are traces of several houses, with large heaps of butchering refuse. The reindeer were killed at the end of the funnel, and were probably pulled by horse to the site where the butchering took place (Hole 2013: 83).

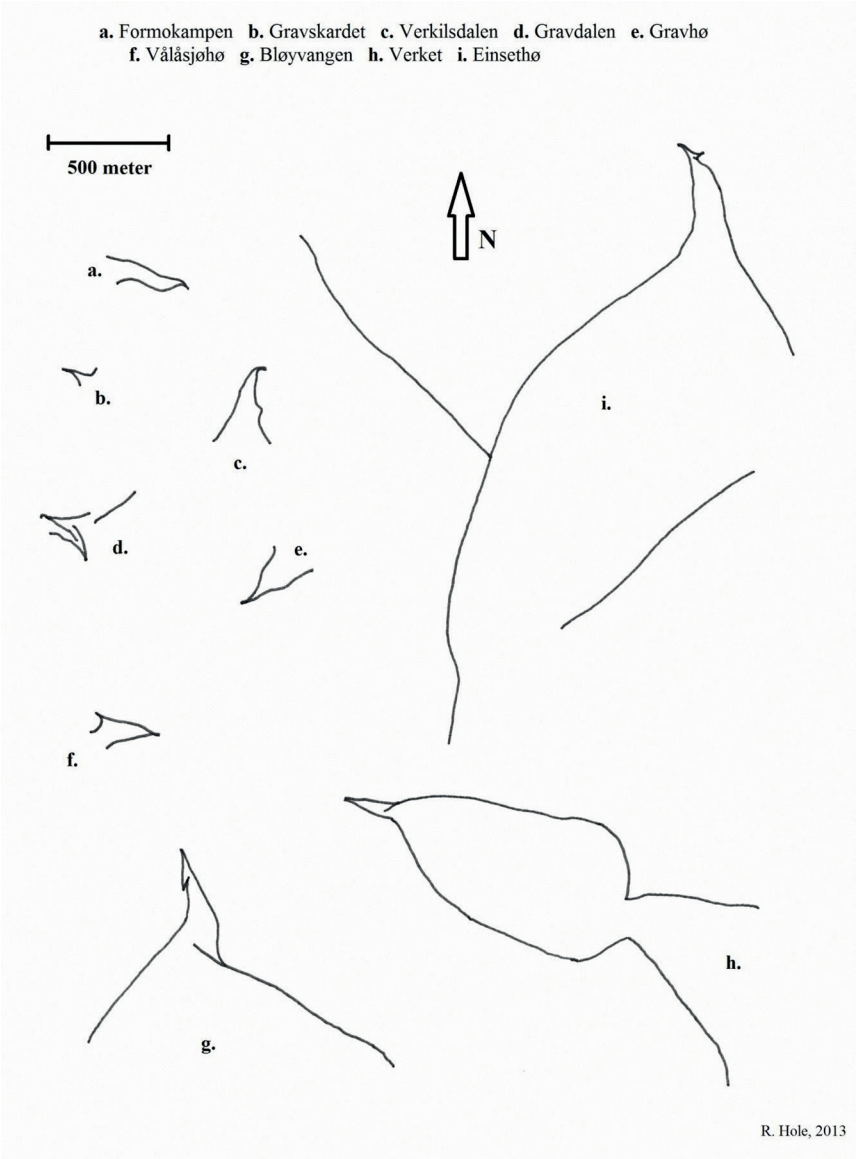


Figure 2.5: The different mass traps, in scale. Type 1: a, b, c, e. Type 2: d,f,g, and Type 3: h, i. (Hole 2013, with permission.)

The trap *h* in Figure 2.5 was found at a place called 'Verket' in Lesja, Oppland County. Variants of this name is found in connection with several of the larger traps, such as Verket, Verkilsdalen, and Verkensseter (Solli 2018). The origin of the name may be interpreted in at least two ways. It may be connected to the Old German word *werka*, meaning work or action, indicating that the hunt was almost industrial (Solli 2018: 17). Another possibility is that it comes from the Old Norse *virki*, meaning timber logs, or a solid fence made of wood, as for example in Danevirke, the great Iron Age wall in Schleswig (Jordhøy et al. 2005: 57). The dimensions of the posts and the small gaps between them indicate a solid wall, and the length was more than a kilometre. I certainly see that both interpretations are possible, but in my opinion, it is more likely that a fence like this, that restricted the passage for everybody who were in these mountains all year around, is very likely to become a place name used by everyone.

The site at Verket is especially interesting because it has a remarkable resemblance to the later fences used for tame reindeer among the Saami. The funnel ends on the top of a small hill, which means that the animals, caught between the arms of the fence, can see an opening between the posts in the fence in front of them. After they pass the 'gate', the terrain falls and the fence opens, and the animals can settle down while the hunters close the opening behind them.

When we look at the different types put together in the same scale, it is easier to understand the similarities and difference between them, and how large the third type really is. In addition to these three types, there are the systems that lead the animals into water, where they were killed. The butchering sites by these traps are similar to the ones in type 3. The watertraps are also very large. Figure 2.6 show the system of cairns that led the animals to the water, and the butchering site on the opposite side (Bergstøl 2016). Analysis of the bone material on the butchering sites show that the main phase was between 1250 and 1300 AD, and estimates from the Sumtangen site alone, is that between 5500 and 7800 reindeer were butchered during those 50 years. Counting the three other localities in the same system that were in operation at the same period, an estimated 11 000–15 000 animals were caught, an average of nearly 300 a year (Indrelid and Hufthammer 2011).

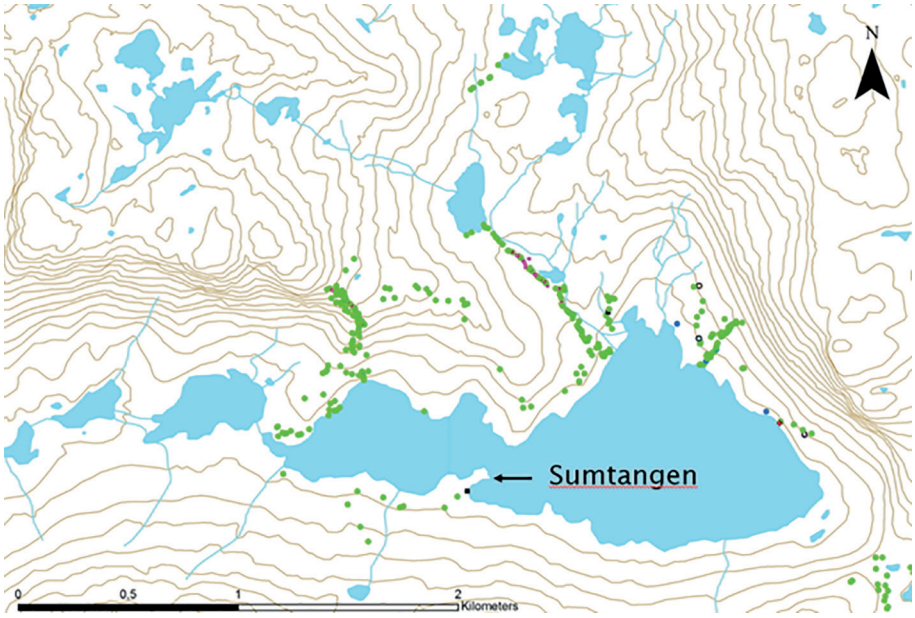


Figure 2.6: Water trapping system at Hardangervidda. (Bergstøl 2016.)

2.4 Dating of mass trapping systems in southern Norway

Not all these mass traps have been dated, but enough to know when the type 3 systems were fully developed. Pitfalls were in use from the Mesolithic all the way up to the 19th century, with the most intensive period during 1000–1300 AD. None of the systems of type 1 or 2 are dated, but there are several dates from the fully developed third type, and of the water traps. It is of course likely that some of the type 1 and 2 traps were still in use in parallel with type 3. It is also possible that the first two types are older.

At Einsethø (*i* in Figure 5), the butchering site was used from an early start around 600 AD, to around 1300, with a peak around 1200 AD (Mikkelsen 1994). At Verket (*h* in Figure 2.5), only two reindeer bones have been dated so far, and they fall between 1000 and 1300 AD (Hole 2013). The large water trapping system at Hardangervidda had a limited use in the Early Iron Age and was then abandoned until the most intensive phase between 1250 and 1300 AD (Indrelid and Hufthammer 2011).

As a conclusion, we see that the third type with a separate butchering/processing site, the same as the largest water trapping systems have, was developed between 1000 and 1300 AD.[1] This matches very well with recent studies that show a genetic bottleneck in the reindeer population in southern Norway in the 11th and 12th Century AD (Røed et al. 2014).

2.5 Trapping in Northern Norway

As in southern Norway, there are pitfalls for reindeer in all areas where the animals migrated, and the story of Ohthere suggests that there was large-scale trapping also in the north in the Viking Age (Bately 2007). Radiocarbon dates have shown an equal time depth in the north as in the south (Furset 1995, 1996; Sommerseth 2009: 253). The most important place is the Varanger peninsula, with more than 3000 pitfalls (Schanche and Schanche 2014). The density of trapping pits is maybe greater here than anywhere else and there are also funnel-shaped traps (NSaa.: *voupman*). The topography of the inner part of the peninsula forms bottlenecks through which the animals had to pass during seasonal migrations. The longest rows of pitfalls are at Gollevarre, located on the isthmus between the Tana river and the Varanger fjord, where a large settlement site with turf huts has been found (Munch and Munch 1998). This site contains middens with huge amounts of reindeer bones and antlers (Hansen and Olsen 2004: 186).

Written records from Vardøhus state that in 1632 and again in 1653, Saami people were charged with not having paid the nine reindeer in taxes from two reindeer fences (No.: *reingårder*) (Niemi 1983: 182–183). The traps were not maintained due to a lack of reindeer. According to Governor Hans Lillienskiöld, they were abandoned in the late seventeenth century (Bjørklund 2013: 175).

Is it possible that they may be as old as the ones in southern Norway, or even older? When we look at the petroglyphs in Alta, there are indications that some kind of enclosures was used as far back as 4000–5000 BC (Helskog 2012). The depictions do not show the same long funnel-shaped arms as the later traps, but these may have been later extensions. It is interesting to note that they were in use as traps for wild animals as late as the 17th century.

The most characteristic feature of the type 3-traps in southern Norway is the butchering sites with large middens of bones and antlers, none of which have been found in connection to the fences at Varanger. The only known large mounds of butchering refuse, are near the large system of pit-fall traps at Gollevarre mentioned above. Three reindeer bones from the midden at Gollevarre are dated between 1225 and 1425 AD, and one after 1520 AD, (Munch and Munch 1998). This is later than

1. Professor Brit Solli carried out excavations at Verket in 2018 and 2019, but the results are not yet published.

the peak of the mass traps in the south, and coincides with the genetic bottleneck, suggesting that the wild reindeer population in Finnmark was drastically reduced in the 16th century (Røed et al. 2018: 284). Instead of the large mounds of bones found with the converging fences in the North, there are numerous circular meat caches (Schanche and Schanche 2014). This indicates that the meat was temporarily buried in the scree to be collected and brought to a settlement site somewhere else.

2.6 From trapping to pastoralism, or from one form of domestication to another?

Ethnographers Ørnulv Vorren and Ernst Manker suggested that the converging fences in Saami reindeer herding must have found their form in the earlier fences for trapping (Vorren and Manker 1976: 64–65). In 1957, when they first published their book, the funnel-shaped mass traps were only known in Finnmark, and Vorren and Manker's thought was probably that Saami pastoralism developed there. I believe that in many ways they were right that the reindeer fences developed from traps for wild reindeer, but that the models were not the ones found in northern Norway.

The archaeological material from the house remains and middens found with the mass traps in southern Norway is typical of Norse sites. The houses found adjacent to the traps were rectangular, some were stone built and others made of timber, and they are similar to houses found in medieval towns (Weber 2003). The archaeological material at the sites suggests the same ethnic affiliation, with for instance several runic inscriptions at Sumtangen, even with reference to the Christian God (Indrelid and Hufthammer 2011).

There were also Saami groups present in the Dovrefjell mountains at the time the funnel shaped traps were in use (Bergstøl and Reitan 2008). One of the largest traps lies at Einsethø (marked 'i', in Figure 5), in the mountains belonging to King Harald Fairhair's farm at Dovre, where the Saga tells that the Norwegian king met, and married, the Saami woman Snøfrid in the ninth century (cf. Mikkelsen 1994; Bergstøl 2008). Even as far south as Hardangervidda, where most of the large water trapping systems are, there are sites that indicate Saami presence (Gjerde 2016). For example, the famous site Sumtangen is located at a headland in Lake Finnsbergvatn. The prefix *Finn-* (meaning 'Saami' in Norse) is found several places in the nearby mountains (Bergstøl 2016). Altogether, this indicate that even if the large scale trapping in southern Norway in the Middle Ages was controlled by Norse hunters and traders, there may have been Saami people involved in the trapping (see also Amundsen this volume).

It has been suggested by anthropologist Tim Ingold and others, that the transition to pastoralism among the Saami marked a change in the relations between man and animals, and in the social relations within the Saami society (Ingold 1980, see also Salmi et al. this volume). From an egalitarian situation, with the same right to hunt every animal, a change occurred to private ownership of a herd. But how much of a transition was this? The Saami already had small herds of domesticated reindeer for milking, pulling sledges, and as decoys (Hansen and Olsen 2004: 209, Bjørklund 2013). The faunal material from Saami hearth row sites even shows they kept sheep or goats in Pasvik from around AD 1000 (Hedman et al, 2015, see also Nuñes et al. this volume). Thus the concept of private ownership of animals was already practiced and well known among the Saami.

Saami hunters, who in many areas hunted wild reindeer in the same mountains as the Norse in southern Norway, met private ownership of traps among their neighbours and trading partners. Ownership and rights to build traps was regulated in the oldest Norwegian laws (cf. Solli 2018). The animals themselves everybody could hunt in the commons, but the right to the traps was private, as

long as they were used and maintained. We can thus argue that the concept of private ownership of traps and hunting installations was well known among the Saami, at least in the south. The Saami may also have taken part in the organised trapping, even if it was controlled by Norse chieftains and kings.

Why did the Saami not develop a pastoral economy with the animals they already had? Or did they even try? The wild reindeer in the mountains of Southern Norway are extremely shy, and may have been impossible to control in large herds. The now extinct wild reindeer population in northern Norway came from the same immigration, more than 12 000 years ago, and have probably had the same behavior (Røed et al. 2011). In Reinheimen, between Jotunheimen and Dovrefjell, reindeer herding ended in the 1950s. The remaining animals were released into the wild, and have been hunted every year since. Studies show that these animals have slower flight response and run shorter distances before settling down again, compared to wild animals in regions where there was never herding (Bevanger et al. 2007: 72). This may indicate that these animals are genetically calmer. Another reason for not building herds with the local, wild animals may have been that the native, migrating reindeer was considered a common good. Perhaps it was more socially acceptable to build up large herds if you did not use community resources, but built it up with new, domesticated animals. Studies of traditional reindeer husbandry shows that it is possible to keep wild and domestic populations separate, even when they exist in the same area (Anderson et al. 2017).

The Saami societies increased contact both with the Norse in the south and west, and with trading partners in today's north-western Russia during the Viking Age and Middle Ages (AD 800–1300) (Hansen and Olsen 2004: 136). At the same time, certain practices and common material features spread throughout the Saami settlement area, for example the hearth row sites (Hedman et al. 2015). This has been described as ethnic consolidation among the Saami (Hansen and Olsen 2004: 140). I will argue that this intensified contact made it possible for the Saami to develop their particular form of pastoralism. The technology of the large traps made it possible to control bigger herds and to separate the animals they wanted to keep from the ones they wanted to take out. This technology was developed and well-known when the new breed of animals was introduced to the region. The genetic evidence points towards an eastern origin of the new animals (Røed et al. 2018). The Saami have had important eastern trading relations that goes far back in time, and they may have had knowledge of these docile animals long before the emergence of pastoralism. Saami pastoralism may thus be seen as a hybrid trait, made possible by contact with neighbouring societies, both to the south and to the east.

The aim of this article has been to combine new empirical data from several sources into the discussions around the big change, from a hunting-based economy with small-scale husbandry to pastoralism. The Saami identity was already closely linked to the reindeer, both through husbandry and hunting. Even with culturally hybrid elements such as innovations in trapping systems and the introduction of a new breed of animals, the Saami pastoralism is a fully Saami invention. How and why this transition happened within the Saami societies is another and much bigger question.

Acknowledgements

I want to thank the editors and two anonymous referees for much needed and appreciated comments on a manuscript that was far from coherent.

Bibliography

Anderson, D. G, K. S. Kvie, V. N. Davydov, and K. Røed. 2017. Maintaining genetic integrity of coexisting wild and domestic populations. Genetic differentiation between wild and domestic Rangifer with long traditions of intentional interbreeding. *Ecology and Evolution* 17(7): 6790–6802.

Bang-Andersen, S. 2009. Prehistoric reindeer trapping by stone-walled pitfalls. News and views. In N. Finlay, S. McCartan, N. Milner, and C. Wickham-Jones (eds.): *From Bann Flakes to Bushmills*, pp. 61–69. Prehistoric Society research paper 1. Oxford: Oxbow Books.

Bately, J. 2007. Ohthere and Wulfstan in the Old English Orosis. In J. Bately and A. Englert (eds.): *Ohthere's Voyages. A Late 9th-Century Account of Voyages along the Coasts of Norway and Denmark and Its Cultural Context*, pp.18–39. Maritime culture of the north 1. Roskilde: Viking Ship Museum.

Bergstøl, J. 2008. *Samer i Østerdalen? En studie av etnisitet i jernalderen og middelalderen i det nordøstre Hedmark*. *Acta humaniora* 325. Oslo: University of Oslo.

Bergstøl, J. 2015a. 8000 år gamle fangstgroper for elg? *Viking* 78:47–62.

Bergstøl, J. 2015b. Trapping pits for reindeer. A discussion on construction and dating. In S. Indrelid, K. L. Hjelle, and K. Stene (eds.): *Exploitation of Outfield Resources – Joint Research at the University Museums of Norway*, pp. 49–54. Universitetsmuseet i Bergen skrifter 32. Bergen: University of Bergen.

Bergstøl, J. 2016. Fangst av villrein på Hardangervidda. In J. C Frøstrup, T. Punsvik, and B. Benberg (eds.): *Villreinen fjellviddas nomade. Biologi, historie, forvaltning*, pp. 99–111. Arendal: Friluftsforlaget.

Bergstøl, J. and G. Reitan. 2008. Samer på Dovrefjell i vikingtiden: et bidrag til debatten omkring samenes sørgrense i forhistorisk tid. *Historisk Tidsskrift* 87(1): 9–27.

Bevanger, K. M, F. O. Hanssen, and P. Jordhøy. 2007. *Villreinen i Ottadalsområdet*. NINA report 227. Trondheim: Norsk institutt for naturforskning.

Bjørklund, I. 2013. Domestication, reindeer husbandry and the development of Sámi pastoralism. *Acta Borealia* 30(2): 174–189.

Bjørnstad, G, T. Flagstad, A. K. Hufthammer, and K. H. Røed. 2012. Ancient DNA reveals a major genetic change during the transition from hunting economy to reindeer husbandry in northern Scandinavia. *Journal of Archaeological Science* 39(1): 102–108.

Furset, O. J. 1995. *Fangstgroper og ildsteder i Kautokeino kommune. Rapport fra forskningsutgraving 24 juli - 3 september 1994*. Institutt for Samfunnsvitenskap 37. Tromsø: University of Tromsø.

Furset, O. J. 1996. *Fangstgroper i Karasjok kommune. Rapport fra forskningsutgraving 3 juli - 4 august 1995*. Institutt for Samfunnsvitenskap 39. Tromsø: University of Tromsø.

Gjerde, Skalleberg, H. 2016. *Sørsamisk eller førsamisk? Arkeologi og sørsamisk forhistorie i Sør-Norge - en kildekritisk analyse*. PhD thesis. Oslo: Museum of Cultural History.

Hansen, L. I. and B. J. Olsen. 2004. *Samenes historie fram til 1750*. Oslo: Cappelen.

Hedman, S. D, B. J. Olsen, and M. Vretemark. 2015. Hunters, herders and hearths. Interpreting new results from hearth row sites in Pasvik, Arctic Norway. *Rangifer* 35(1): 1–24.

Helskog, K. 2012. Ancient depictions of reindeer enclosures and their environment. *Fennoscandia Archaeologica* 29(1): 29–54.

Hole, R. 2013. *Massefangstanlegg for villrein. Ei studie av sosial kontekst basert på romlege og kronologiske variablar*. MA-thesis. Trondheim: Norwegian University of Science and Technology.

Indrelid, S. and A. K. Hufthammer. 2011. Medieval mass trapping of reindeer at the Hardangervidda mountain plateau, South Norway. *Quaternary International* 238(1): 44–54.

Indrelid, S, A. K. Hufthammer, and K. Røed. 2007. Fangstanlegget på Sumtangen, Hardangervidda - utforskningen gjennom 165 år. *Viking* 70: 125–154.

Ingold, T. 1980. *Hunters, Pastoralists and Ranchers. Reindeer Economies and Their Transformations*. Cambridge Studies in Social Anthropology 28. Cambridge: Cambridge University Press.

Jordhøy, P. 2007. *Gamal jakt- og fangstkultur som indikatorar på trekkmønster hjå rein. Kartlagde fangstanlegg i Rondane, Ottadalen, Jotunheimen og Frollhogna.* NINA report 246. Trondheim: Norsk institutt for naturforskning.

Jordhøy, P. 2012. *Gamal villreinfangst i Rondane. Dei store fangstgroprekkene i høve til villreintrekk og beite*. NINA report 872. Trondheim: Norsk institutt for naturforskning.

Jordhøy, P, S. A. Hoem, and K. Støren Binns. 2005. *Gammel jakt- og fangstkultur som indikatorer for eldre tiders jaktorganisering, ressurspolitikk og trekkmønster hos rein i Dovretraktene*. NINA report 19. Trondheim: Norsk institutt for naturforskning.

Mikkelsen, E. 1994. *Fangstprodukter i vikingtidens og middelalderens økonomi. Organiseringen av massefangst av villrein i Dovre.* Universitetets Oldsaksamlings skrifter 18. Oslo: Universitetets Oldsaksamling.

Munch, J. S. and G. Stamsø Munch. 1998. Utgravningene på boplassen på Gållevarri. In Ø. Vorren (ed.): *Villreinfangst i Varanger fram til 1600–1700 årene*, pp. 106–133. Tromsø museums skrifter 28. Tromsø: Nordkalott-Forlaget.

Murashkin, A. I, E. M. Kolpakov, V. Shumkin, V. Khartanovich, and V. Moiseyev. 2016. Kola Oleneostrovskiy grave field: A unique burial site in the European Arctic. In P. Uino and K. Nordqvist (eds.): *New Sites, New Methods: Proceedings of the Finnish-Russian Archaeological Symposium, Helsinki, 19–21 November, 2014*, pp. 185–199. Iskos 21. Helsinki: The Finnish Antiquarian Society.

Niemi, E. 1983. *Vadsøs historie. Fra øyvær til kjøpstad*. Bd. 1. Vadsø: Vadsø kommune.

Røed, K. H, Ø. Flagstad, G. Bjørnstad, and A. K. Hufthammer. 2011. Elucidating the ancestry of domestic reindeer from ancient DNA approaches. *Quaternary International* 233(1): 83–88.

Røed, K. H, I. Bjørklund, and B. J. Olsen. 2018. From wild to domestic reindeer – Genetic evidence of a non-native origin of reindeer pastoralism in northern Fennoscandia. *Journal of Archaeological Science* 19: 279–286.

Røed, K. H, G. Bjørnstad, Ø. Flagstad, H. Haanes, A. K. Hufthammer, P. Jordhøy, and J. Rosvold. 2014. Ancient DNA reveals prehistoric habitat fragmentation and recent domestic introgression into native wild reindeer. *Conservation Genetics* 15(5): 1137–1149.

Schanche, A. and K. Schanche. 2014. Jakt og fangst i eldre tid. *Ottar* 302(4): 14–22.

Solli, B. 2018. Reindeer hunting, materiality, entanglement and society in Norway. *Journal of Glacial Archaeology* 3(1): 1–26.

Sommerseth, I. 2009. *Villreinfangst og tamreindrift i Indre Troms: Belyst ved samiske boplasser mellom 650 og 1923*. PhD thesis. Tromsø: University of Tromsø.

Storli, I. 1994. *"Stallo"-boplassene. Spor etter de første fjellsamer?* Oslo: Novus.

Storli, Inger. 2007. Ohthere and his world. A contemporary perspective. In J. Bately and A. Englert (eds.): *Ohthere's Voyages. A Late 9th-Century Account of Voyages along the Coasts of Norway and Denmark and Its Cultural Context*, pp. 76–99. Maritime culture of the north 1. Roskilde: Viking Ship Museum.

Vorren, Ø. 1998. *Villreinfangst i Varanger fram til 1600–1700 årene*. Tromsø museums skrifter 28. Tromsø: Nordkalott-Forlaget.

Vorren, Ø. and E. Manker. 1976. *Samekulturen. En kulturhistorisk oversikt*. 2nd edition. Tromsø: Universitetsforlaget.

Weber, B. 2003. Lafteteknikk og hustyper: Introduksjon av laftete bygninger i Norge. *Primitive tider* 5: 65–83.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

3

Working with reindeer: Methods for the identification of draft reindeer in the archaeological record

Anna-Kaisa Salmi[1], Sirpa Niinimäki[2], and Hanna-Leena Puolakka[3]

Abstract

Draft and cargo reindeer were an efficient means of transportation for the Saami. The use of draft reindeer allowed the efficient movement of people and their belongings in the arctic landscape without roads. The use and training of draft reindeer led to a close working relationship between humans and animals. Working reindeer were companions to the Saami in their daily tasks and the training of an individual reindeer for several years created a companionship between the reindeer and the trainer. Recent developments in zooarchaeology offer the possibility to identify working reindeer in the archaeological record. New methods broaden the scope of interpretation of archaeological reindeer bone finds from Saami sites, especially the interpretations of the relationships between the Saami and the reindeer in the past. This paper presents some of the recent developments in zooarchaeological methodology, such as the development of muscle attachment site scoring for reindeer, as well as the identification of working-related pathological lesions on reindeer skeletons, and the use of bone cross-sections in the physical activity assessment of reindeer.

Keywords: physical activity reconstruction, palaeopathology, entheseal changes, biomechanics, reindeer

3.1 Introduction

Despite regional variations in reindeer herding traditions and the role of herding in the subsistence of the Saami from different parts of northern Fennoscandia, reindeer have been major players in the Saami world. Reindeer were domesticated probably from the Late Iron Age onwards (Bjørklund 2013; Hansen and Olsen 2014: 195–206; Mulk 2009; Sommerseth 2011). Archaeological and genetic evidence suggest that reindeer pastoralism became increasingly important in the Late Medieval and Early Modern periods, especially from the 16th century AD onwards (Bjørnstad et al. 2012; Bjørklund 2013; Hansen and Olsen 2014: 195–206; Mulk 2009; Sommerseth 2011; Røed et al. 2018; Wallerström 2000). However, the adoption of reindeer pastoralism varied in time and space. For instance, in Kemi Lapland in present day Finland, reindeer herding remained small-scale and was supported by other means of livelihood well into the 17th century AD and later (Tegengren 1952). On the other hand, it has been suggested that the transition to pastoralism already began in the Swedish mountain

1. University of Oulu, anna-kaisa.salmi@oulu.fi
2. University of Oulu, sirpa.niinimäki@oulu.fi
3. University of Oulu, hanna-leena.puolakka@oulu.fi

and forest areas from the 9th century AD onwards (Bergman et al. 2013; Hedman 2003). The Saami also used reindeer for pulling sledges and carrying loads. Working reindeer were usually castrated bulls (SaaN.: *heargit*) that were trained for working from the age of three to four years. These animals shared their lives with their human trainers and became working partners, forming a relationship where both the animals and people got to know each other, taught each other, and worked together.

This paper explores some of the analytical possibilities for archaeologists to identify working reindeer in the archaeological record (Figure 3.1). We will especially concentrate on palaeopathology, changes in muscle attachment sites (entheseal changes) and bone-cross-sections. The paleopathological analysis of working-related lesions has been conducted on other species such as cattle and horses (e.g. Bartosiewicz et al. 1997; Levine et al. 2005) and recently on reindeer (Salmi and Niinimäki 2016). Additionally, cross-sectional bone analyses have been applied to animals (e.g. Shackelford et al. 2013). The methodology for the analysis of entheseal changes has been developed for reindeer (Niinimäki and Salmi 2016) and work is currently being carried out to employ this method on other species, such as the horse (Binde et al. 2018; Niskanen 2018).

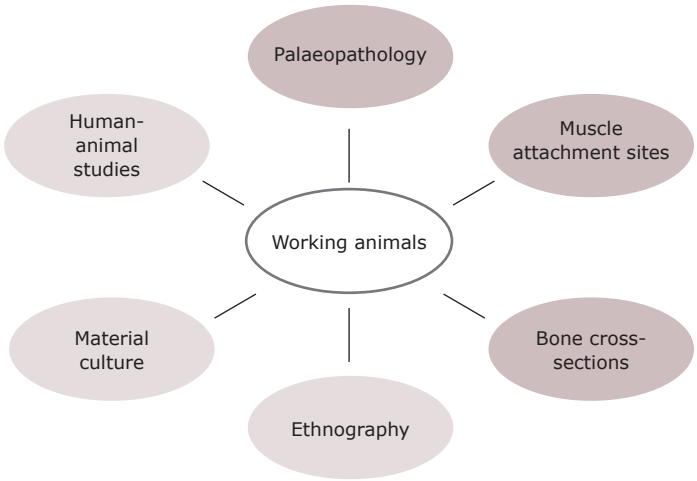


Figure 3.1: Methods and fields of study involved in the study of working animals of the past.

Understanding the relationship between people and the reindeer they were interacting with is another important goal of the paper. In this paper, we sketch out some of the reasons it is important to identify working animals in the archaeological record. Working animals are an indication of animal domestication. In addition, reindeer training and working together with reindeer are carried out according to cultural practices and they create special bonds between people and individual animals. The identification of draft reindeer in the archaeological record provides access to a vast set of cultural practices and ideas, as well as an interspecies network of social interaction.

3.2 History and ethnography of working with reindeer

It has been suggested, that the use of reindeer for the transportation of cargo was important for the Saami from the early stages of reindeer domestication onwards (e.g. Bjørklund 2013; Ingold 1986). Ingold (1986) has argued that castrated male reindeer were probably trained for draft use already in the early stages of domestication. It has also been argued that the earliest written documents mentioning domesticated reindeer, Ohthere's account to King Alfred the Great in England in 890

AD, testifies to the existence of draft reindeer. Ottar told the King that he had six hundred tame deer, among them six decoy reindeer (an animal used to attract others of its own species for hunting purposes) (Bately 2007: 46). This passage has usually been translated as evidence of the use of decoy reindeer for hunting, but Bately (2007: 56) suggests that according to the correct translation, they should be understood as tame male animals "kept at the homestead, not allowed to roam free". As pointed out by Bjørklund (2013), tame (and therefore supposedly castrated) male reindeer do not make very good decoy animals. Moreover, Bjørklund argues that hunting with decoy animals became important only after the pitfall systems and corrals fell out of use and hunting individual animals with firearms became more common (Bjørklund 2013: 177). Whichever way Ottar's story is interpreted, the role of working reindeer in the early historical documents of reindeer pastoralism is clear. For instance, Olaus Magnus writes about draft reindeer in his *Description of the Northern Peoples* (1996 [1555]: 215): "The natives make their way into these mountains in winter-time using reindeer like yoked stags to bear quite heavy burdens for a distance of almost two hundred Italian miles." To name another example, Johannes Schefferus' *Lapponia* (1963 [1673]) features a cover image of a couple walking with a reindeer carrying a child in a cradle on its back.

The Saami used reindeer for transportation and cargo in various ways. First, they were used to pull loads, for instance sledges of different types and travois made of the trunks of young birch trees (Itkonen 1948: 399–412). The Saami have traditionally used only one animal to pull a sled. Only the Skolt Saami used an arrangement of several reindeer, a custom adopted from the Komi people of the Kola Peninsula, from the late 19th century AD onwards (Itkonen 1948: 388–412). The traditional Saami harness was made of leather. It was placed around the neck of the reindeer, on the anterior side of the scapulae. It was attached to the sledge with a leather string that went under the reindeer's stomach and between its legs. When this type of harness is used, the reindeer mainly uses its neck muscles to pull the weight of the sledge. Later, the Saami used a wooden collar (SaaN.: *leaŋggat*), adapted from a horse collar, on draft reindeer (Figure 3.2). The collar was attached to a harness of which there were different types according to their function. When using a collar, the reindeer uses its shoulder and upper back muscles to pull the weight (Itkonen 1948: 414–416).

Figure 3.2: Different types of reindeer harnesses in the Skolt Sámi Heritage House in Sevettijärvi. (Photo: A. Salmi.)

In addition to pulling sledges, the Saami used reindeer for carrying loads. The load was attached to two crossing wooden beams, placed on the back of the reindeer so that the load was distributed evenly on both sides of the reindeer (Itkonen 1948: 388–391; Näkkäläjärvi and Pennanen 2000). A usual load weighed about 25–35 kg, and the reindeer walked with the load for two to three hours and then had a break (Itkonen 1948: 388–391). Sometimes small children of three to six years of age travelled by riding on top of the load on the back of the cargo reindeer (Itkonen 1948: 391).

Usually the Saami employed castrated males to carry and pull loads, but there are sporadic mentions of females being used for these purposes as well. It was said that the females were faster than males, but they had less stamina. Usually, however, young castrated males (ca. three to four years of age) were selected for training to be transport reindeer. The training commenced in the autumn when the reindeer were first tied to a tree for a few days, after which the trainer started to walk them around on a leash (Itkonen 1948: 418–419). The training for pulling loads commenced in the winter when there was permanent snow cover on the ground. At that point, the trainer harnessed the young trainee reindeer in front of a sled, first together with more experienced animals. The weight of the load was gradually increased, and the trainer started to teach steering and turning. Some reindeer were faster to learn than others. The personality and teaching style of the trainer also affected how the reindeer learned and how good a transport reindeer it became (Itkonen 1948: 421–422).

3.3 What does it mean to work with a reindeer: The human-animal relationship perspective

Draft use is a close working relationship between humans and animals. Gala Argent (2016) describes the process of learning to ride a horse as an interspecies apprenticeship, where both humans and horses pass along social knowledge. Horses are social animals, which means that they have a range of social relationships within their herds. The relationships may vary as the herd composition changes over the year and are therefore contextual and negotiable. Horses, therefore, learn to form social relationships with a variety of individuals in different roles (Argent 2016).

Like horses, reindeer are social animals. Therefore, much of this applies to the relationship with a reindeer and its trainer and/or human companion in draft activities (Figure 3.3). Terhi Vuojala-Magga (2010) writes about the relationship between a draft reindeer and the trainer. According to her, the training process involves learning and cooperation between human and animal individuals, and both parties, the human and the animal, learn in the course of training. The trainer gets to know the reindeer and the right way to deal with that reindeer. In this sense, the reindeer teaches the human. The trainer and the reindeer get to know each other on a very personal level, and they become attuned to each other's feelings (Vuojala-Magga 2010). In this process of learning and getting to know each other, communication takes place through nonverbal means, such as body movement, gestures, touch, and physical closeness (Argent 2012; Vuojala-Magga 2010). Therefore, working with animals is not a one-way relationship where humans master the animals and take advantage of their work. It is a relationship between human and animal persons (Argent 2012).

Learning also happens between people and between generations. Knowledge of reindeer herding is often transmitted nonverbally and involves learning by doing with the more experienced herders. Furthermore, reindeer pass information between generations as the reindeer also learn behavior from older generations – for instance being around people and dogs. Therefore, knowledge of herding practices is transmitted from older reindeer to the young (Vuojala-Magga 2010).

The human-animal relationship perspective on working reindeer clearly shows that the identification of working reindeer in the archeological record is topical not only because it can inform us about

Figure 3.3: A boy about to take a ride in a reindeer sledge. Korvanen, Sodankylä 1938. (Photo: Samuli Paulaharju/Finnish Heritage Agency. KK3490:7605.)

the beginnings of reindeer domestication, but also because it has implications on how we understand the relationships between people and reindeer. Working animals were clearly companions for people. They had personhood and there would have been a significant deal of non-verbal communication with people. In the Saami worldview, animals were persons in their own, non-human ways and they could be incorporated into the web of social interaction (Helander-Renvall 2010). Working reindeer were surely among those animals included in the sphere of social interaction. Therefore, their identification in the archaeological record provides information about a certain way of relating to an animal individual, although ideas of animal personhood certainly must have varied from time to time and from place to place.

3.4 Methods for the identification of draft use in reindeer

3.4.1 Palaeopathology

Paleopathological analysis means the study of ancient diseases, usually using the marks they leave on the skeleton as source material. The skeletal effects of working have been studied especially in draft cattle and horses (Bartosiewicz et al. 1997; De Cupere et al. 2000; Levine et al. 2005; Telldahl 2012). It is often difficult to decipher the etiology of pathological lesions in archaeological bone finds due to the multifactorial origins of many types of lesions (e.g. De Cupere et al. 2000; Flensborg and Kaufmann 2012; Telldahl 2012; Thomas 2008). Most likely, pathological changes at joints and ligament attachment sites are due to over-use, or over-loading of the joint: with extra weight the joints and ligaments are under greater stress than they are structurally designed to carry. Research has shown

that draft use typically causes lipping and new bone growth in the form of exostoses in the phalanges of draft cattle. The forelimb phalanges are especially affected (Bartosiewicz et al. 1997; De Cupere et al. 2000; Telldahl 2012). Riding, on the other hand, especially causes vertebral pathological lesions in horses (Levine et al. 2005). Bone growth in the form of exostoses occur near joints and develops as calcifying cartilage at ligament and/or muscle attachment sites of over-stressed joints. In addition, some specific trauma patterns could indicate human influence.

According to our preliminary study with a small sample of modern draft reindeer skeletons from Siberia, the patterns caused by draft use and riding seem to be quite similar in reindeer. The Siberian individuals used as draft reindeer exhibited new bone growth as a result from extra stress in their forelimb, and to a degree, in hindlimb phalanges (Figure 3.4). There was also vertebral spinous process warping, possibly related to draft use, in one individual. The warping was potentially related to uneven stress caused by the harness (Salmi and Niinimäki 2016). The Evenki use multiple reindeer to pull a sled, and the harness is asymmetrical (Vasilevich and Levin 1951: 69). However, as they also change the harnessing side from time to time in order to not to exhaust the animals (pers. comm. V. Davydov 2014), and such warping happens in other species in the wild (Flensborg and Kauffman 2012), the relationship between spinous process warping and the draft use of reindeer remains unclear. Moreover, because the ethnographic records suggest the Saami usually used only one reindeer to pull a sled and the harness was symmetrical, it is not likely that vertebral warping related to uneven strain would be observed in the archaeological material from Saami sites.

Figure 3.4: New bone growth in the form of exostoses on the proximal forelimb phalanges of a cargo reindeer from Taimyr, Siberia (Photo: A. Salmi).

Siberian reindeer herders also use domesticated reindeer for riding, and we observed probable riding-related new vertebral bone growth and fusion in one individual that was known to have been ridden by an unusually heavy rider (ca. 90 kg; whereas the suggested upper limit for reindeer riders is 70 kg) (Salmi and Niinimäki 2016). Based on current data, it is difficult to estimate the effects of carrying loads on vertebral pathologies in reindeer. The weight of the cargo loaded on a reindeer (ca. 25–35 kg according to the ethnographic data collected from the Saami) was considerably less than the weight of an adult rider, but it is still possible that habitual load-carrying caused extra stress on the backs of draft animals. The warping of the vertebral spinous process in one of the individuals in the sample (Salmi and Niinimäki 2016) was the only other vertebral pathology observed in the sample despite the fact that the animals were also used as draft reindeer.

We are currently expanding this preliminary small sample with more working reindeer. In addition to Siberian draft reindeer, we are collecting skeletons of reindeer working in the tourism industry and competing in reindeer racing in Finland. The increased sample size will allow a more detailed examination of the relationship between pathological lesions in reindeer and working. Moreover, it is important to include Fennoscandian reindeer in the sample, because of the genetic and phenotypic variation in reindeer (Banfield 1961; Røed et al. 2008) and the cultural differences in the use of draft reindeer between the Saami and the Siberian reindeer-herding peoples.

3.4.2 Entheseal changes

Patterns of physical activity can be analyzed by examining entheseal changes (EC). Entheses are sites where a muscle attaches to the bone either directly, via a periosteum, or a tendon (Benjamin et al. 1986, Benjamin et al. 2002; Villotte 2006). Muscle attachments close to joints usually attach via a tendon and are thus called fibrocartilaginous, as the entire or most of the soft-tissue part is comprised of the tendon. Muscles attaching to the bone diaphysis occur either directly to the bone or via the periosteum, where most or all of the soft-tissue is fibrous and are thus called 'fibrous attachments' (Benjamin et al. 1986; Benjamin et al. 2002; Jurmain and Villotte 2010; Santos et al. 2011; Villotte 2006; Villotte et al. 2016). An enthesis can be a muscle's origin or insertion site, although insertion sites are more likely to exhibit variation compared to the muscle origin (Niinimäki and Salmi 2014). EC observation methods were originally developed for humans (Hawkey and Merbs 1995; Henderson et al. 2017; Mariotti et al. 2004; Robb 1998; Villotte 2006), but recently observation methods suitable for other mammal species have been developed (for reindeer Niinimäki and Salmi 2014; 2016; for horse Binde et al. 2018).

The observation of bony changes at the entheses is based on the theory that habitual physical activity affects, or stresses, muscle attachments via muscle loading, or 'pulling' (Hawkey and Merbs 1995; for information on terminology, see Jurmain and Villotte 2010; Villotte et al. 2016). The markers were previously known as 'musculoskeletal stress markers'. More specifically, muscle-bone and muscle-tendon junctions are sites that experience mechanical loading, or stress, when a muscle contracts, and the frequency and possibly the magnitude of muscle use may be reflected in these junctions and exhibit as bone changes at the entheses. These changes are broadly considered as bone formation and bone resorption (Henderson et al. 2013, 2017; Villotte 2006). However, the etiology of EC is not well understood, and changes can be considered as over-use (mainly in case of fibrocartilaginous entheses and bone resorption), which would be pathological, or 'wear-and-tear' due to normal function. Activity reconstructions are then observed as variations between individuals in manifesting this 'wear-and-tear' as EC. More actively used joints and muscles tend to exhibit more pronounced bone formation, and sometimes bone resorption presents as fine porosity or larger porosity which is considered to be due to vascularization. The etiology of EC remains debatable and is most likely multifactorial (Jurmain and Roberts 2008; Villotte and Knüsel 2013). EC vary according to age, sex, hormones, body size (Chen et al. 2007; Jurmain and Roberts 2008; Mariotti et al. 2004; Niinimäki 2012; Villotte et al. 2010; Weiss et al. 2010; Wilczak 1998) and activity (for humans, e.g. Havelcová et al. 2012; Molnar 2006; Weiss 2007; for reindeer Niinimäki and Salmi 2014; Salmi and Niinimäki 2016).

Therefore, these factors should be considered when interpreting observed EC. Furthermore, due to large inter-individual variation in the manifestations of activity via EC, this method works best when making comparisons between groups rather than comparing individuals.

A preliminary analysis comparing the EC in modern non-working reindeer and four working reindeer suggests that working especially affects the entheses in the upper forelimbs, although the sample size was too small for a statistical analysis (Salmi and Niinimäki 2016). We observed difference between working and non-working reindeer in the deltoid and lateral digital extensor muscles attaching to the humerus. The deltoid muscle flexes the shoulder joint and the lateral digital extensor

extends it. Extensor muscles work against greater weights when an animal is carrying loads, as do the muscles stabilizing the joint. Flexors and especially muscles that act to extend the joint to take on the animal's weight and/or push the animal forward work against the extra weight placed on the animal via a harness when pulling loads. Although the sample size of working reindeer in this analysis is small and the results will need to be confirmed with a larger sample, the preliminary results suggest that the shoulder extensors and flexors need to work more when a reindeer is pulling a load. This makes sense also considering that the draft-related paleopathological lesions are often the most pronounced in the forelimbs that carry most of the animal's weight and pulls the animal forward (Bartosiewicz et al. 1997; De Cupere et al. 2000; Telldahl 2012).

EC can also be indicative of feeding behavior in reindeer. Comparing the entheseal scores in free-ranging and zoo reindeer (reindeer kept in commercial or research station zoos), we observed that free-ranging reindeer had statistically significantly higher entheseal scores in the attachment site of the *flexor profundus* ulnar head, *flexor profundus digiti* and *biceps brachii* muscles. We hypothesized that this difference is due to feeding behaviour and feeding practices of the zoo reindeer. The winter diet of free-ranging reindeer consists mainly of lichen (Nieminen and Heiskari 1989; Nieminen 1994: 94–97) and the animals spend a considerable time digging for lichen from under the snow using their antlers and forelimbs (Helle 1982: 47–59; Itkonen 1948: 82; Nieminen and Pietilä 1999: 20–21; Korhonen 2008: 40). We believe that the repetitive movement of the elbow joint in that activity affects the attachment sites of the muscles (Niinimäki and Salmi 2016).

Therefore, an analysis of EC is suitable for analyzing a range of physical activity patterns, including working and feeding behavior. The additional working reindeer skeletons we are currently collecting will also be analyzed for EC scoring in order the better understand the working-related changes in the muscle attachment sites.

3.4.3 Bone cross-sectional properties

Long bone cross-sectional properties, such as bone robusticity in the cortical area (CA), and the bending and torsional rigidity (J), as well as the bone shape and ratio of second moment of inertia planes are considered to reflect loading patterns of humans and animals (Figure 3.5). Thus, these properties have been used in reconstructing physical activity from the skeletons of humans and other mammals (e.g. Shackelford et al. 2013; Shaw and Stock 2009).

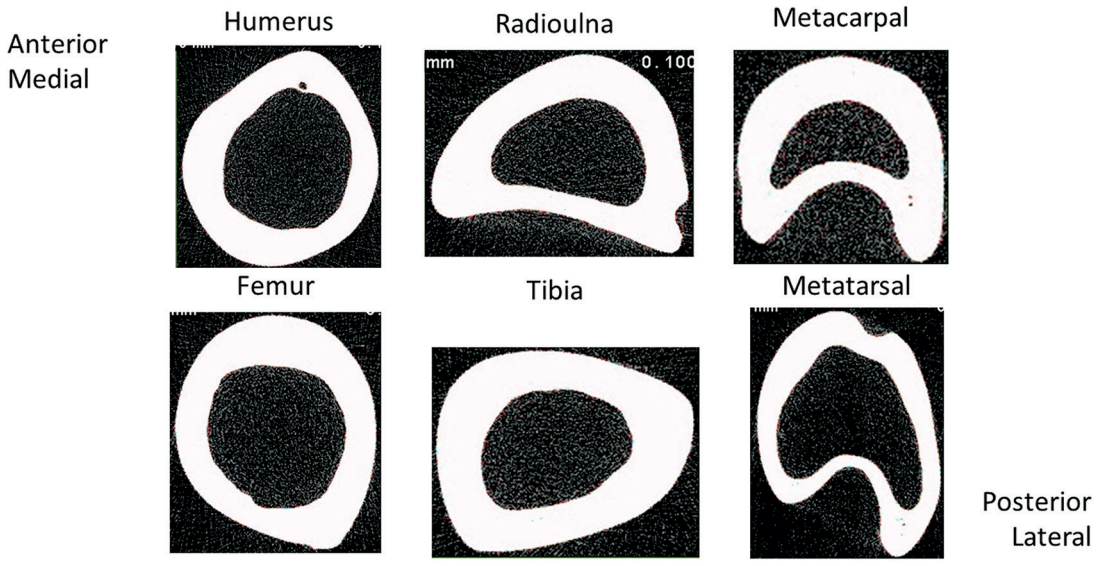


Figure 3.5: Examples of cross-sections of reindeer humerus, radioulna, metacarpal, femur, tibia and metatarsal. The cross-sections are from different individuals and do not represent any particular activity group (Figure: S. Niinimäki).

The underlying assumption for making activity inferences from cross-sectional properties of bones is that mechanically strong and appropriate bone structures are achieved by exercise-induced skeletal adaptation at the loaded regions (Nikander et al. 2006). Increased loading increases both the bone mass and the cross-sectional bone area (Daly et al. 2004; Haapasalo et al. 2000; Kontulainen et al. 2002), thus affecting bone robusticity indicators. The loading direction seems to associate more with cortical bone distribution (Narra et al. 2013; Niinimäki et al. 2013; Niinimäki et al. 2017) and the cross-sectional bone shape (Lieberman et al. 2004; Narra et al. 2013; Nikander et al. 2005, 2009; Ruff et al. 1994; Ruff 2000), thus affecting bone shape indicators.

The loading of the bones occurs through mechanical stimuli experienced by the skeleton, and in activity reconstructions the result concerning the bone robusticity and shape is used to back-track the animals' loading environment and loading history. The sources of mechanical stimuli are due to weight-bearing loads, ground impacts and muscle activity (Kohrt et al. 2009; Niinimäki et al. 2017). Loading occurs in terms of magnitude and rate, where a high strain rate is considered more important than the strain magnitude (Lanyon and Rubin 1984) because the number and frequency of repetitions influence the skeletal response (Lanyon 1987, 1996; Umemura et al. 2002). Furthermore, the strain distribution is important, where unusual loading directions are more osteogenic (Lanyon 1987). A recent study by Niinimäki et al. (n.d.) indicates that the effects of activity on geometrical bone properties are not only due to activity-induced increases in muscle size and strength (i.e., muscle loading), but that activity has a more direct effect on geometrical bone properties. This is likely to be attributable to ground impact loading, and the magnitude and frequency at which this takes place (Niinimäki et al. n.d.).

Weight-bearing affects bone robusticity, where the cross-sectional bone properties scale with the body mass, body proportions, and muscle moment arms (Davies and Stock 2014; Ruff et al. 1994; Ruff 2000; Weaver 2003). With a greater body size, the bone tissue is distributed proportionally further from the cross-sectional centroid (Brianza et al. 2007). Weight-bearing can be considered intrinsic loading because the body weight determines the baseline for all gravitationally-induced mechanical stimuli from ground impacts. Therefore, it is essential to consider the body size and limb proportions when reconstructing activity from skeletons, especially regarding carrying and/or pulling loads. This is especially important considering reindeer, where the body size and limb proportions differ not only between males and females of the species, but there are also size difference between subspecies (Nieminen and Helle 1980). Hormonal influence (Daly 2007), such as the presence or absence of testosterone which affects muscle development should be considered to be a pathway which affects bone loading during activity. In reindeer, draft and racing reindeer are traditionally castrated, which affects the muscle development and therefore cross-sectional bone properties. However, this more likely affects the robusticity than the shape.

3.5 Conclusion

The Saami have probably used draft reindeer ever since reindeer were domesticated (e.g. Bjørklund 2013; Ingold 1986). The identification of draft reindeer in the archaeological record therefore provides important answers to the when, where, and how questions related to reindeer domestication. In addition to being useful in the identification of the origins of reindeer domestication, the archaeological markers of draft use provide information on cultural practices and human-reindeer relationships.

The ways of using reindeer to pull and carry loads have varied over time and at different locations. For instance, the Saami usually used only one reindeer to pull a sledge. Only the Skolt Saami used an arrangement of multiple reindeer to pull a sledge, which is a common practice among the Siberian reindeer herding peoples. Furthermore, the harness design has varied. The traditional leather harness

was placed around the neck of the reindeer and the animal used its neck muscles to pull the weight. When using a wooden collar, adapted from a horse collar, the reindeer used the muscles attached to the scapula and proximal humerus. In principle, different workloads should manifest in different patterns of skeletal changes.

Working together also creates bonds between the individual animals and people. Draft reindeer were usually castrated bulls, trained for working from the age of three to four years. In such a relationship, the trainer and the reindeer get to know each other closely. They learned how to respond to each other and learned to communicate with each other through body movement, gestures, touch, and physical closeness. Although the relationships between a reindeer and its trainer are always individual, both people and reindeer also pass knowledge or reindeer herding practices from one generation to the next. In effect, the identification of working reindeer in the archaeological record means an identification of past interspecies companionship and communication.

One of the methods presented in this paper is the paleopathological analysis of work-related lesions in animals. This method is fairly well established and is regularly used to identify draft cattle and working horses especially. Through a preliminary study with a small sample size, our research group has established that the method is also suitable for identification of working reindeer, and we are currently collecting more data to increase the sample size and include Fennoscandian working reindeer. Other methods discussed in this paper, i.e., analysis of entheseal changes and bone cross-sections are regularly used for human physical activity assessment but have seldom been applied to animals. Our pioneering results on the entheseal changes in reindeer which were engaged in different types of activity, as well as our work to establish a methodology to infer physical activity from reindeer bone cross-sections, open new possibilities for understanding human-animal interactions in the past. In particular, they will help to understand the various relationships, interactions, and companionships between the Saami and their reindeer.

Acknowledgments

The writing of this paper was financially supported by **the Academy of Finland** *(Project 308322) and* **European Research Council** *(ERC Starting Grant 2017 756431).*

Bibliography

Argent, G. 2012. Toward a privileging of the nonverbal. Communication, corporeal synchrony, and transcendence in humans and horses. In J. A. Smith and R. W. Mitchell (eds.): *Experiencing Animal Minds. An Anthology of Animal-Human Encounters*, pp. 111–128. New York: Columbia University Press.

Argent, G. 2016. Killing (constructed) horses – Interspecies elders, empathy and emotion, and the Pazyryk horse sacrifices. In: L. Broderick (ed.): *People with Animals. Perspectives & Studies in Ethnozooarchaeology,* pp. 19–32. Oxford: Oxbow Books.

Banfield, A. W. F. 1961. *A Revision of the Reindeer and Caribou, Genus Rangifer*. Bulletin of the Biological Services National Museum of Canada 177 and Biological series 66. Ottawa: Department of Northern Affairs and National Resources.

Bartosiewicz, L, W. Van Neer, and A. Lentacker. 1997. *Draught Cattle. Their Osteological Identification and History*. Tervuren: Royal Museum of Central Africa

Bately, J. 2007. Text and translation. In J. Bately and A. Englert (eds.): *Ohthere's Voyages. A Late 9th-Century Account of Voyages along the Coasts of Norway and Denmark and Its Cultural Context*, pp. 40–58. Maritime culture of the north 1. Roskilde: The Viking Ship Museum.

Benjamin, M, E. J. Evans, and L. Copp. 1986. The histology of tendon attachment to bone in man. *Journal of Anatomy* 149: 89–100.

Benjamin, M, T. Kumai, S. Milz, B. M. Boszczyk, A. A. Boszczyk, and J. R. Ralphs. 2002. The skeletal attachment of tendon – Tendon "enthesis". *Comparative Biochemistry and Physiology. Part A* 133(4): 931–945.

Bergman, I, O. Zackrisson, and L. Liedgren. 2013. From hunting to herding. Land use, ecosystem processes, and social transformation among Sami AD 800–1500. *Arctic Anthropology* 50(2): 25–39.

Binde, M, D. Cochard, and C. Knüsel. 2018. Entheseal changes. A method to detect activities in archaeological horse skeletons. Presentation at the *Conference of the European Association of Archaeologists*, Barcelona, 7.9.2018.

Bjørklund, I. 2013. Domestication, reindeer husbandry and the development of Sámi pastoralism. *Acta Borealia* 30(2): 174–189.

Bjørnstad, G, Ø. Flagstad, A. K. Hufthammer, and K. H. Røed. 2012. Ancient DNA reveals a major genetic change during the transition from hunting economy to reindeer husbandry in Northern Scandinavia. *Journal of Archaeological Science* 39(1): 102–108.

Brianza, S. Z, P. D'Amelio, N. Pugno, M. Delise, C. Bignardi, and G. Isaia. 2007. Allometric scaling and biomechanical behaviour of the bone tissue. An experimental intraspecific investigation. *Bone* 40(6): 1635–1642.

Chen, X, C. Macica, A. Nasiri, S. Judex, and A. E. Broadus. 2007. Mechanical regulation of PTHrP expression in entheses. *Bone* 41(5): 752–759.

Daly, R. 2007. The effect of exercise on bone mass and structural geometry during growth. In R. Daly and M. Petit (eds.): *Optimizing Bone Mass and Strength. The Role of Physical Activity and Nutrition during Growth*, pp 33–49. Medicine and sport science 51. Basel: Karger.

Daly, R. M, L. Saxon, C. H. Turner, A. G. Robling, and S. L. Bass. 2004. The relationship between muscle size and bone geometry during growth and in response to exercise. *Bone* 34(2): 281–287.

Davies, T. G. and J. T. Stock. 2014. The influence of relative body breadth on the diaphyseal morphology of the human lower limb. *American Journal of Human Biology* 26(6): 822–835.

De Cupere, B, A. Lentacker, W. Van Neer, M. Waelkens, and L. Verslype. 2000. Osteological evidence for the draught exploitation of cattle. First application of a new methodology. *International Journal of Osteoarchaeology* 10(4): 254–267.

Flensborg, G. and C. A. Kaufmann. 2012. Bone pathologies in a modern collection of Guanaco (Lama guanicoe). Contributions to the interpretation of bone lesions in archeological contexts. *International Journal of Paleopathology* 2(4): 199–207.

Haapasalo, H, S. Kontulainen, H. Sievänen, P. Kannus, J. A. Järvinen, and I. Vuori. 2000. Exercise-induced bone gain is due to enlargement in bone size without a change in volumetric bone density. A peripheral quantitative computed tomography study of the upper arms of male tennis players. *Bone* 27(3): 351–357.

Hansen, L. I. and B. Olsen. 2014. *Hunters in transition. An outline of early Sami history*. Leiden: Brill.

Havelcová, P, M. Hladík, and P. Velemínský. 2012. Entheseal changes. Do they reflect socioeconomic status in the early medieval Central European population? (Mikulčice – Klášteřisko, Great Moravian Empire, 9th−10th century). *International Journal of Osteoarchaeology* 23(2): 237–251.

Hawkey, D. and C. Merbs. 1995. Activity-induced musculoskeletal stress markers (MSM) and subsistence strategy changes among ancient Hudson Bay Eskimos. *International Journal of Osteoarchaeology* 5(4): 324–338.

Hedman, S. 2003. *Boplatser och offerplatser. Ekonomisk strategi och boplatsmönster bland skogssamer 700−1600 AD*. Studia archaeologica Universitatis Umensis 17. Umeå: Umeå University.

Helander-Renvall, E. 2010. Animism, personhood and the nature of reality. Sami perspectives. *Polar Record* 46(1): 44–56.

Helle T. 1982. *Peuran ja poron jäljillä*. Helsinki: Kirjayhtymä.

Henderson, C. Y. and F. Alves-Cardoso. 2012. Special issue entheseal changes and occupation. Technical and theoretical advances and their applications. *International Journal of Osteoarchaeology* 23(2): 127–134.

Henderson, C. Y, V. Mariotti, D. Pany-Kucera, S. Villotte, and C. Wilczak. 2013. Recording specific features of fibrocartilaginous entheses. Initial tests using the Coimbra method. *International Journal of Osteoarchaeology* 23(2): 152–162.

Henderson, C. Y, V. Mariotti, F. Santos, S. Villotte, and C. Wilczak. 2017. The New Coimbra method for recording entheseal changes and the effect of age-at-death. *Bulletins et mémoires de la Société d'anthropologie de Paris* 29(3−4): 140–149.

Ingold, T. 1986. Reindeer economies and the origins of pastoralism. *Anthropology Today* 2(4): 5–10.

Itkonen, T. I. 1948. *Suomen lappalaiset vuoteen 1945*. Vol. I−II. Porvoo: Söderström.

Jurmain, R. and C. Roberts. 2008. Juggling the evidence. The purported "acrobat" from Tell Brak. *Antiquity* 28: 318–319.

Jurmain, R. and S. Villotte. 2010. *Terminology. Entheses in medical literature and physical anthropology: a brief review* [Online]. Document published online in 4th February following the Workshop in Musculoskeletal Stress Markers (MSM): limitations and achievements in the reconstruction of past activity patterns, University of Coimbra, July 2−3, 2009. Coimbra: Centro de Investigação em Antropologia e Saúde. Available at: http://www.uc.pt/en/cia/msm/MSM terminology3.pdf. [8 December 2018].

Kohrt, W, D. W. Barry, and R. S. Schwartz. 2009. Muscle forces or gravity. What predominates mechanical loading on bone? *Medicine & Science in Sports and Exercise* 41(11): 2050–2055.

Kontulainen, S, H. Sievänen, P. Kannus, M. Pasanen, and I. Vuori. 2002. Effect of long-term impact-loading on mass, size, and estimated strength of humerus and radius of female racquet-sports players. A peripheral quantitative computed tomography study between young and old starters and controls. *Journal of Bone and Mineral Research* 18(2): 352–359.

Korhonen T. 2008. Poroerotus. *Historia, toiminta ja tekniset ratkaisut*. Suomalaisen Kirjallisuuden Seuran toimituksia 1165. Helsinki: Suomalaisen kirjallisuuden seura.

Lanyon, L. E. 1987. Functional strain in bone tissue as an objective and controlling stimuli for adaptive bone remodeling. *Journal of Biomechanics* 20(11−12): 1083–1093.

Lanyon, L. E. 1996. Using functional loading to influence bone mass and architecture. Objectives, mechanisms, and relationship with estrogen of the mechanically adaptive process in bone. *Bone* 18(supplement 1): S37–S43.

Lanyon, L. E. and C. T. Rubin. 1984. Static vs dynamic loads as an influence on bone remodeling. *Journal of Biomechanics* 17(12): 897–905.

Levine, M. A, K. E. Whitwell, and L. B. Jeffcott. 2005. Abnormal thoracic vertebrae and the evolution of horse husbandry. *Archaeofauna* 14: 93–109.

Lieberman, D. E, J. D. Polk. and B. Demes. 2004. Predicting long bone loading from cross-sectional geometry. *American Journal of Physical Anthropology* 123(2): 156–171.

Magnus, Olaus. 1996 [1555]. Olaus Magnus, *A Description of the Northern Peoples*, 1555. Commentary by J. Granlund. Translated by P. Fisher. and H. Higgens. Hakluyt Society 2:182. London: Hakluyt Society.

Mariotti, V, F. Facchini, and M. G. Belcastro. 2004. Enthesopathies – Proposal of a standardized scoring method and applications. *Collegium Antropologicum* 28(1): 145–159.

Molnar, P. 2006. Tracing prehistoric activities. Musculoskeletal stress marker analysis of a Stone-Age population on the Island of Gotland in the Baltic sea. *American Journal of Physical Anthropology* 129(1): 12–23.

Mulk, I. M. 2009. From metal to meat: Continuity and change in ritual practices at a Saami offering place, Viddjavárri, Lapland, northern Sweden. In T. Äikäs (ed.): *Máttut-Máddagat. The Roots of Saami Ethnicities, Societies and Spaces/Places*, pp. 116–133. Publications of the Giellagas Institute 12. Oulu: University of Oulu

Narra, N, R. Nikander, J. Viik, J. Hyttinen, and H. Sievänen. 2013. Femoral neck cross-sectional geometry and exercise loading. *Clinical Physiology and Functioning Imaging* 33(4): 258–266.

Nieminen, M. 1994. *Poro. Ruumiinrakenne ja elintoiminnat*. Rovaniemi: Riista- ja kalatalouden tutkimuslaitos.

Nieminen, M, T. Helle. 1980. Variations in body measurements of wild and semi-domestic reindeer (*Rangifer tarandus*) in Fennoscandia. *Annales Zoologici Fennici* 17(4): 275–283.

Nieminen, M. and U. Heiskari. 1989. Diets of freely grazing and captive reindeer during summer and winter. *Rangifer* 9(1): 17–34.

Nieminen, M. and U. A. Pietilä. 1999. *Peurasta poroksi*. Rovaniemi: Paliskuntain yhdistys.

Niinimäki, S. 2012. What do muscle marker ruggedness scores actually tell us? *International Journal of Osteoarchaeology* 21(3): 292–299.

Niinimäki, S, S. Söderling, J-A. Junno, M. Finnilä, and M. Niskanen. 2013. Cortical bone thickness can adapt locally to muscular loading and age. *HOMO – Journal of Comparative Human Biology* 64(6): 474–490.

Niinimäki, S, N. Narra, L. Härkönen, R. Nikander, S. Abe, C. Knüsel, and H. Sievänen. 2017. The relationship between loading history and proximal femoral diaphysis cross-sectional geometry. *American Journal of Human Biology* 29(4): e22965.

Niinimäki S. and A- K. Salmi. 2016. Entheseal changes in free-ranging versus zoo reindeer – Observing activity status of reindeer. *International Journal of Osteoarchaeology* 26(2): 314–323.

Niinimäki, S, N. Narra, L. Härkönen, S. Abe, R. Nikander, J. Hyttinen, C. Knüsel, and H. Sievänen. Forthcoming. Do bone geometrical properties of the proximal femoral diaphysis reflect loading history, muscle properties or body dimensions? Submitted to *American Journal of Human Biology*.

Nikander, N, H. Sievänen, A. Heinonen, and P. Kannus. 2005. Femoral neck structure in adult female athletes subjected to different loading modalities. *Journal of Bone and Mineral Research* 20(3): 520–528.

Nikander, N, H. Sievänen, K. Uusi-Rasi, A. Heinonen, and P. Kannus. 2006. Loading modalities and bone structures at nonweight-bearing upper extremity and weight-bearing lower extremity. A pQCT study of adult female athletes. *Bone* 39(4): 886–894.

Nikander, R, P. Kannus, P. Dastidar, M. Hannula, L. Harrison, T. Cervinka, N. G. Narra, R. Aktour, T. Arola, H. Eskola, S. Soimakallio, A. Heinonen, J. Hyttinen, and H. Sievänen. 2009. Targeted exercises against hip fragility. *Osteoporosis International* 20(8): 1321–1328.

Niskanen, M. 2018. Scaling with size in horses may have implications for reconstructing activity from entheseal changes. Presentation at the *Conference of the European Association of Archaeologists*, Barcelona, 7.9.2018.

Näkkäläjärvi, K. and J. Pennanen. 2000. Poronhoito perustuu pohjoisen luonnon vuotuiskiertoon. In: J. Pennanen and K. Näkkäläjärvi (eds.): *Siiddastallan – Siidoista kyliin. Luontosidonnainen saamelaiskulttuuri ja sen muuttuminen,* pp. 76–79. Inarin saamelaismuseon julkaisuja 3. Oulu: Pohjoinen.

Robb, J. 1998. The interpretation of skeletal muscle sites: A statistical approach. *International Journal of Osteoarchaeology* 8(5): 363–377.

Ruff, C. B. 2000. Body size, body shape, and long bone strength in modern humans. *Journal of Human Evolution* 38(2): 269–290.

Ruff, C. B, A. Walker, and E. Trinkaus. 1994. Postcranial robusticity in Homo. III: Ontogeny. *American Journal of Physical Anthropology* 93(1): 35–54.

Røed, K. H, Ø. Flagstad, M. Nieminen, Ø. Holand, M. J. Dwyer, N. Røv, and C. Vilà. 2008. Genetic analyses reveal independent domestication origins of Eurasian reindeer. *Proceedings of the Royal Society B Biological Sciences* 275(1645): 1849–1855.

Røed, K. H, I. Bjørklund, and B. J. Olsen. 2018. From wild to domestic reindeer – Genetic evidence of a non-native origin of reindeer pastoralism in Northern Fennoscandia. *Journal of Archaeological Science* 19: 279–286.

Salmi, A-K. and S. Niinimäki. 2016. Entheseal changes and pathological lesions in draught reindeer skeletons – Four case studies from present-day Siberia. *International Journal of Paleopathology* 14: 91–99.

Santos, A. L, F. Alves-Cardoso, S. Assis, and S. Villotte, S. 2011. The Coimbra Workshop in musculoskeletal stress markers (MSM). An annotated review. *Antropologia Portuguesa* 28: 135–161.

Schefferus, J. 1963 [1674]. *Lapponia eli Lapin maan ja kansan uusi ja todenmukainen kuvaus*. Translated by T. Itkonen. Rovaniemi: Lapin tutkimusseura.

Shackelford, L, F. Marshall, and J. Peters. 2013. Identifying donkey domestication through changes in cross-sectional geometry of long bones. *Journal of Archaeological Science* 40(12): 4170–4179.

Shaw, C. N. and J. T. Stock. 2009. Habitual throwing and swimming correspond with upper limb diaphyseal strength and shape in modern human athletes. *American Journal of Physical Anthropology* 140(1): 160–172.

Sommerseth, I. 2011. Archaeology and the debate on the transition from reindeer hunting to pastoralism. *Rangifer* 31(1): 11–127.

Tegengren H. 1952. *En utdöd lappkultur i Kemi lappmark. Studier i Nordfinlands kolonisationshistoria*. Acta Academiae Aboensis 19:4. Åbo: Akademi.

Telldahl, Y. 2012. Skeletal changes in lower limb bones in domestic cattle from Eketorp ringfort on the Öland Island in Sweden. *International Journal of Paleopathology* 2(4): 208–216.

Thomas R. 2008. Diachronic trends in lower limb pathologies in Later Medieval and Post-Medieval cattle from Britain. In G. Grupe, G. McGlynn. and J. Peters (eds.): *Limping Together Through the Ages. Joint Afflictions and Bone Infections*, pp. 187–201. Documenta archaeobiologiae 6. Rahden/ Westf: Verlag Marie Leidorf.

Umemura, Y, N. Sogo, and A. Honda. 2002. Effects of intervals between jumps or bouts on osteogenic response to loading. *Journal of Applied Physiology* 93(4): 1345–1348.

Vasilevich, G. and M. Levin. 1951. Tipy olenevodstva i ikh proiskhozhdenie. *Sovetskaya Etnographiia* 1951(1): 63–87.

Villotte, S. 2006. Connaissances médicales actuelles, cotation des enthésopathies. Nouvelle méthode. *Bulletins et mémoires de la Société d'anthropologie de Paris* 18(1): 65–85.

Villotte, S, D. Castex, V. Couallier, O. Dutour, C. Knüsel, and D. Henry-Gambier. 2010. Enthesopathies as occupational stress markers. Evidence from the upper limb. *American Journal of Physical Anthropology* 142(2): 224–234.

Villotte, S. and C. J. Knüsel. 2013. Understanding entheseal changes. Definition and life course changes. *International Journal of Osteoarchaeology* 23(2): 135–146.

Villotte, S, S. Assis, F. Alves-Cardoso, C.Y. Henderson, V. Mariotti, M. Milella, D. Pany-Kucera, S. Nivien, C. A. Wilczak, and R. Jurmain. 2016. In search of consensus. Terminology for entheseal changes (EC). *International Journal of Paleopathology* 13: 49–55.

Vuojala-Magga, T. 2010. Knowing, training, learning. The importance of reindeer character and temperament for individuals and communities of humans and animals. In F. Stammler. and H. Takakura (eds.): *Good to Eat, Good to Live with: Nomads and Animals in Northern Eurasia and Africa,* pp. 43– 61. Northeast Asian study series 11. Sendai: Tohoku University.

Wallerström T. 2000. The Saami between East and West in the Middle Ages: An archaeological contribution to the history of reindeer breeding. *Acta Borealia* 17(1): 3–39.

Wilczak, C. 1998. Consideration of sexual dimorphism, age, and asymmetry in quantitative measurements of muscle insertion sites. *International Journal of Osteoarchaeology* 8(5): 311–325.

Weiss, E. 2007. Muscle markers revisited. Activity pattern reconstruction with controls in a Central California Amerind population. *American Journal of Physical Anthropology* 133(3): 931–940.

Weiss, E, L. Corona, and B. Schultz. 2010. Sex differences in musculoskeletal stress markers. Problems with activity pattern reconstructions. *International Journal of Osteoarchaeology* 22(1): 70–80.

Weaver, T. D. 2003. The shape of the Neandertal femur is primarily the consequence of a hyperpolar body form. *Proceedings of National Academy of Sciences* 100(12): 6926–6929.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

4

Animal remains from Saami offering places: Glimpses of human-animal relations from Finnish Lapland AD 1000-1900

Milton Núñez[1], Tiina Äikäs[2], Jouni Aspi[3], Gunilla Eriksson[4], Matti Heino[5], Kerstin Lidén[6], Markku Oinonen[7], Jari Okkonen[8] and Anna-Kaisa Salmi[9]

Abstract

We present the results of 41 AMS and 49 stable isotope determinations of animal bones retrieved at seven Saami offering places or *sieiddit* from Finnish Lapland. The offered remains are dominated by reindeer, but other wild and domesticated species were also present. AMS dates and artefacts suggest that six of the studied *sieiddit* were being utilized as offering places by the 13th century, and that votive activity continued with varying intensity until around 1900. The AMS dates and stable isotope analyses of the *sieidi* bones produced interesting, somewhat unexpected, results that reflect various aspects of human-animal interaction in Finnish Lapland. In addition to information about Finland's *sieidi* sites in terms of utilization chronology and the species offered at them, the study provides a major body of new data from animal species that lived in Finnish Lapland during AD 1000–1900.

Keywords: AMS dates, Finnish Lapland, human-animal relations, Saami offering places, stable isotopes

4.1. Introduction

During 2006-2007, Oulu university researchers participated in a pilot project, the Ukko Project, involving the archaeological investigations of Saami sacred places (*sieidi*) in the vicinities of Inari, northern Lapland (Harlin 2007; Okkonen 2007; Harlin & Ojanlatva 2008). The results led to a major Finnish Academy project, *Human-animal relations among the Finnish Sámi 1000–1800 AD* in 2009–2011. Its aim was to study the sacral meanings of the *sieiddit*, their spatial and chronological distribution, the species offered at them as well as to gain information about the origin and domestication status of the offered sheep and reindeer remains through DNA and stable isotope (SIA) analyses. Much of the work on the *sieiddit* has been published (Äikäs 2009, 2011, 2015; Äikäs et al. 2009;

1. Archaeology department, University of Oulu, nunez.milton@gmail.com
2. Archaeology department, University of Oulu, tiina.aikas@oulu.fi
3. Biology department, University of Oulu, jouni.aspi@oulu.fi
4. Archaeological Research Laboratory, Stockholm University, gunilla.eriksson@arklab.su.se
5. Biology department, University of Oulu, matti.heino@oulu.fi
6. Archaeological Research Laboratory, Stockholm University, kerstin.liden@arklab.su.se
7. Laboratory of Chronology, University of Helsinki, markku.oinonen@helsinki.fi
8. Archaeology department, University of Oulu, jari.okkonen@oulu.fi
9. Archaeology department, University of Oulu, anna-kaisa.salmi@oulu.fi

Salmi 2012; Salmi et al. 2018). The complex aDNA determinations are currently in progress at the Oulu Biology department, but the AMD and SIA results have not been published. The main purpose of this paper is therefore to make those results known for the benefit of other researchers.

4.2 The *sieiddit* and their contents

Much has been written about the little that is known about the Saami sacrificial places or *sieiddit*, which the ancient Saami regarded as the abode of spirits/deities and made votive offerings to them (e.g. Rhen 1897 [1671]; Schefferus 1673; Fellman 1906 [1820s]; Holmberg 1915; Qvigstad 1926; Paulaharju 1932; Itkonen 1946, 1948, 1962; Serning 1956; Manker 1957; Mebius 1968; Vorren and Eriksen 1993; Rydving and Kristofersson 1993; Halinen 2010; Äikäs 2011, 2015). They have been briefly described as follows:

> *The Saami worshipped stones, made them as gods, and anointed them with the grease of fish and reindeer* (said an old Saami according to Paulaharju 1932: 5, M. Núñez's translation).

> *Seides had not been fashioned by human hands, but were natural stones, often hollowed out by water, having, as such, often peculiar form, resembling human beings or animals. Those regarded as most valuable were the stones resembling human beings* (Holmberg 1964: 100).

> *Big stones and peculiar boulders were also used as sacrificial altars. Sacrifices could also be made in grottoes or rocky caves on cliffs, beneath or, on the summit of fjells, in fens, beside waterfalls, in lakes and springs or at a tree* (Manker 1968: 86).

A few *sieiddit* have been investigated archaeologically (Hallström 1921, 1922, 1932; Itkonen 1948 II: 315; Erä-Esko 1957; Manker 1957; Sarvas 1971; Halinen 2006), including those involved in Oulu University projects during 2006-2011 (Okkonen 2007; Harlin & Ojanlatva 2008; Äikäs 2011, 2015). The Oulu projects carried out fieldwork at several *sieidi* sites (Äikäs 2011, 2015), but the AMS and SIA determinations involved only the seven sites that produced viable bone samples (Figure 4.1).

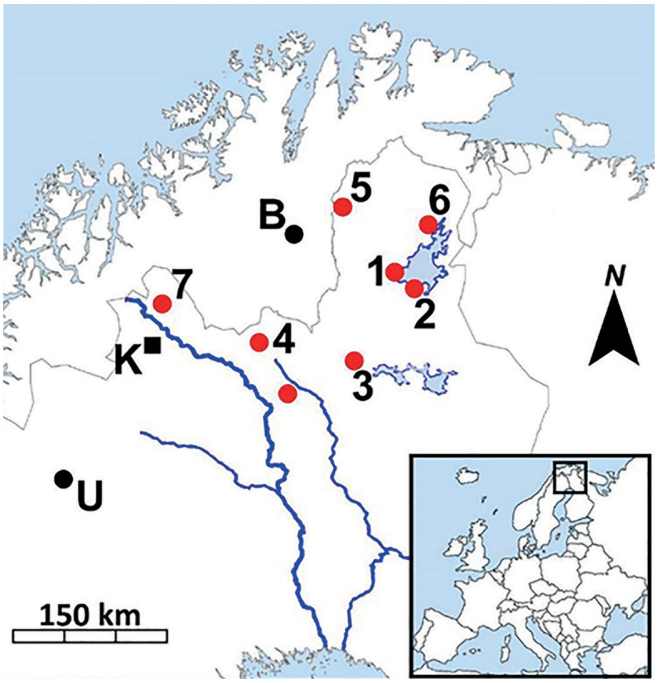


Figure 4.1: Location of the investigated sieidi sites of Ukonsaari (1), Ukko (2), Taatsi (3), Näkkälä (4), Seitala [Sieiddakeädgi] (5), Nitsijärvi [Koskikaltiojoen suu] (6) and Dierpmesvárri (7), and some localities mentioned in the text: Beajalgŋai (B), Könkämä (K) and Unna-Saiva (U).

Due to the sensitive sacral nature of *sieidi* sites and their contents, our investigations followed a procedure developed in consultation with the Inari Saami community . The archaeological fieldwork consisted of opening the ground in areas adjacent to the presumed *sieidi* core, which generally consisted of a large boulder, or of rock cavities in the case of the Ukonsaari site. The excavations were small (4–16 m²) and rather shallow, since artefacts and bones generally occurred immediately below the turf. A few of the additional test pits made within 20 m from the Ukonsaari *sieidi* cavities yielded also bones, which had probably ended up there through taphonomic processes and/or human intervention. (Okkonen 2007; Harlin 2007; Harlin and Ojanlatva 2008; Äikäs 2009, 2011, 2015; Äikäs et al. 2009; Äikäs and Núñez 2009a, 2009b, 2009c, 2010, 2011).

As agreed with the Saami community, the bones found at the *sieidi* sites were analyzed in situ. The determination of species was carried out by the osteologists Eeva-Kristina Harlin (Harlin 2007; Harlin and Ojanlatva 2008) in the case of the two Inari *sieiddit*, and by Anna-Kaisa Salmi (Puputti 2008a, 2008b, 2008c, 2009; Salmi 2011) at the other five *sieidi* sites (Table 4.1). Those bones identified to species and which were well-preserved enough for yielding laboratory results were bagged as samples for AMS, DNA, and SIA determinations. Bones of the less frequent fish and bird species were also chosen as samples despite their poor preservation state, but many lacked enough collagen for AMS and SIA analyses. Those bones not chosen as samples were left at the site in accordance with the mentioned agreement. For the same reason, after all the material needed for laboratory determinations had been utilized, what remained of the bone samples was reburied at their respective *sieidi* sites in August 2011 (Äikäs and Núñez 2012).

Table 4.1: NISP and MNI of fauna remains found at the studied sieidi sites: (1) Ukonsaari, (2) Ukko, (3) Taatsi, (4) Näkkälä (4), (5) Seitala [Sieiddakeädgi], (6) Nitsijärvi [Koskikaltiojoen suu] and (7) Dierpmesvárri. When possible, the earliest AMS dates of each species have been included. (Harlin 2007; Harlin and Ojanlatva 2008; Puputti 2008a, 2008b, 2008c, 2009, 2010; Salmi 2011.)

Species	Sites	NISP	%	MNI	%	Cal.AD
Reindeer	1–7	573	32.5	43	52.5	1165–1260
Sheep	1, 2	139	7.9	15	18.3	1300–1420
Bear	4	4	0.2	1	1.2	1165–1260
Mammals (prob. reindeer)	1–7	662	37.5			
Gallinaceous birds (grouses)	1,2,3,6	81	4.6	16	19.5	1270–1400
Waterfowl	2,3	7	0.4	3	3.7	1040–1230
Birds	1,2,3,6	46	2.6			
Pike	2,3	5	0.3	2	2.4	1040–1220
Perch	3	225	12.7	1	1.2	
Trout	3	12	0.7	1	1.2	
Fish	2,3,4	11	0.6			
Totals		1765	100	82	100	

1. The procedure was developed in 2006 in connection with the pilot project fieldwork on Ukonsaari island by the involved Oulu University archaeologists, some of whom live in Inari, and the staff of the Sámi Museum and Nature Centre Siida in Inari. Subsequently, the same procedures were also applied in the larger follow-up project, which had also the green light of the Sámediggi (Finnish Sámi Parliament).

The extraction of collagen and the subsequent measurement of carbon ($\delta^{13}C$), nitrogen ($\delta^{15}N$) and sulphur ($\delta^{34}S$) stable isotope ratios were carried out on 32 bone samples at the Archaeological Research Laboratory and the Stable Isotope Laboratory of Stockholm University (cf. Eriksson et al. 2009 for laboratory procedures). Furthermore, the 41 samples submitted for AMS dating were also complimentarily measured at the Helsinki Laboratory of Chronology, 32 for $\delta^{13}C$ and 27 for $\delta^{13}C$ and $\delta^{15}N$ (cf. Bläuer et al. 2016 for laboratory procedures). Altogether, a total 49 samples underwent $\delta^{13}C$ and $\delta^{15}N$ analyses, some of them by duplicate (Appendix 4.1). All the analyzed bones were from adult individuals. The C/N ratios of the samples analyzed at Stockholm fell within 3.2-3.5. The Helsinki laboratory also reported good collagen quality from the samples but did not provide the actual figures.

It is difficult to assess the representability of the identified species. Their presence was initially influenced by choices determined by individuals and cultural traditions and, later on, by taphonomic factors and the archaeologists' decisions. The more fragile bones of fish and birds are probably underrepresented. The only thing that can be said at this point, is that the presence of the recorded species indicates that they were suitable for offering, at least at some point in time and place. Nevertheless, the numerous reindeer bones (52% MNI) should make a fairly representative sample of reindeer populations, and the same probably applies also to the sheep remains, which are fairly common at Inari, with a 29% MNI in the two Inari *sieiddit*.

4.3 Human-reindeer interaction in northern Fennoscandia

Reindeer have been part of Fennoscandia's fauna tens of thousands of years (Siivonen 1975; Núñez 1991, 2019). They returned after being exiled by the last glaciation, reaching Fennoscandia around the same time as the first pioneer Mesolithic groups 10 000–12 000 years ago (Rankama and Ukkonen 2001; Bergman et al. 2004; Rankama and Kankaapää 2008). The subsequent millennia probably saw a gradual increase of human-reindeer interaction in northern Fennoscandia, as suggested by hunting pits and the so-called 'corral' engravings from the 5th millennium BC (Spång 1991; Furset 1995, 1996; Halinen 2005; Helskog 2011, 2012). The use of those specialized devices probably led to reindeer domestication and, eventually, to the adoption of the herding practices[2].

The origins of Fennoscandian reindeer herding practices is a long-debated topic that goes back to the early 20th century and still preoccupies the minds of many Scandinavian researchers. In contrast, the subject is seldom touched by Finnish archaeologists (cf. however Carpelan 1979, 1993), possibly because herding practices had already developed in northern Scandinavia before spreading into Finland. The various estimates for the antiquity of reindeer herding practices in northern Fennoscandia fall within AD 200–1700, with most scholars placing the event in either the Viking period or the beginning of the Early Modern period. There is no room to go into this here, but useful outlines have been presented by several authors (e.g. Forsberg 1995; Storli 1996; Sommerseth 2011; Bjørklund 2013; Hansen & Olsen 2014).

With the possible exception of an intriguing passage in the Old English version of Orosius, Ohtheres' account (Bately & Englert 2007: 45–46), there are no reliable sources on the subject before the 16th or 17th century, when reindeer herding practices already existed in some parts of northern Fennoscandia. Olaus Magnus describes some sort of sedentary pastoralism in Norrbotten with people owning from 10 to 500 reindeer (Magnus 1555: 596), but he has been criticized for his exaggerated numbers and inaccurate reindeer descriptions (Núñez 2019). Olaus' numbers are repeated by others one century later (Rheen 1907 [1667]: 23; Negri 1750 [1660s]: 20); but by then, as pointed out by Rheen, herd sizes had been rapidly increasing. In any event, it seems clear that fairly developed forms of reindeer herding practices were established in some parts of northern Scandinavia by the mid-17th

2. By "herding practices" is meant one or more individuals claiming ownership and controlling a group (herd) of semi-wild domesticated reindeer for various possible purposes: insuring food in lean times, prestige and/or wealth, identity, marriage/alliance transactions, etc.

century (Rheen 1907 [1667]; Negri 1750 [1660s]; Schefferus 1673; Hultbald 1968; Lundmark 1982; Hansen 1990; Hansen and Olsen 2006, 2014; Bjørklund 2013).

However, although the reindeer inventories of Karl IX indicate that the pastoralization process was under way west of the Tornio river by 1605, present Sweden (Figure 4.1), they show that it had barely begun to the east of it, on the Finnish side (Hultblad 1968). There are also several sources praising the abundance of wild reindeer and their hunting in Finland during the 1700s, but by the late 1800s they had become extinct and reindeer herding practices were fully established (Castrén 1754: 59; Wegelius 1754: 17; Aurén 1894; Melander 1920: 29–33; Tegengren 1952; Storå 1971; Pulliainen and Leinonen 1990; Nieminen 2013).

4.4 AMS determinations and chronology of the *sieidi* sites

The utilization chronology of the seven studied *sieiddit* is illustrated in the diagrams of Figures 4.2–4.3. It appears that at least six of the *sieiddit* were in use by AD 1300, as suggested by five AMS ages (Appendix 4.1) and the 13th-century silver ornament found by young, pre-Knossos Arthur Evans at the Ukonsaari *sieidi* in 1873 (Nordman 1922; Carpelan 2003; Okkonen 2007). The 41 AMS dates from the studied *sieiddit* suggest continuous use from the 12th or 13th century with a clear drop in votive activities in the 17th century, which may be connected with the increasing influences from Church and Crown (Itkonen 1945; Rydving 1993; Hansen and Olsen 2014; Westman Kuhmunen 2016). A similar pattern can be observed at a few *sieidi* sites from Norway and Sweden (Vorren and Eriksen 1993; Mulk 2009; Salmi et al. 2015). A lesser disturbance around the 14th century could be linked to the Black Death (Figure 4.3). Artefact finds and ethnohistorical sources suggest a reduced but nevertheless continuous utilization of some *sieidi* sites into the 18th and 19th-centuries (Fellman 1906 [1820s] I; Paulaharju 1927, 1932; Itkonen 1948, 1962; Carpelan 2003, Äikäs 2011, 2015).

The AMS results would imply that, despite its dominance, reindeer may not have been the first species offered at some *sieidi* sites. However, at least the slightly earlier dates of swan and pike could

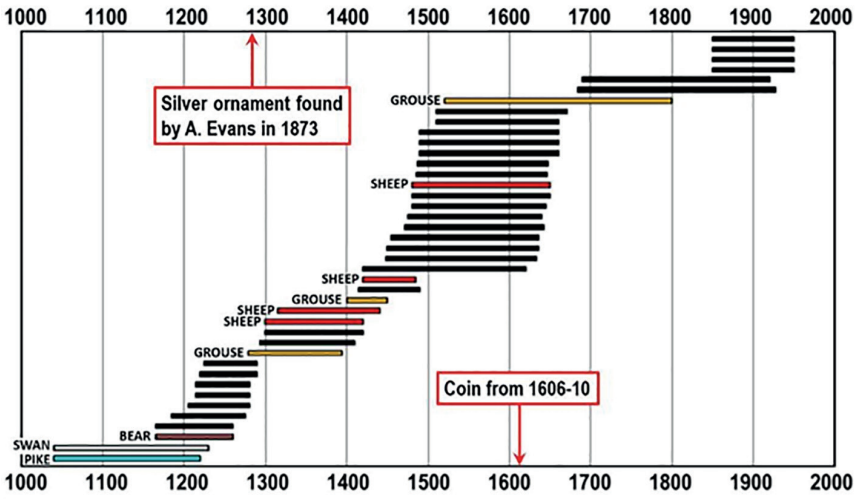


Figure 4.2: Ranges (2σ) of 41 calibrated AMS dates of bones from the studied *sieiddit*. The black bars represent reindeer, the other species are in different colors and labelled accordingly (see also Appendix 4.1).

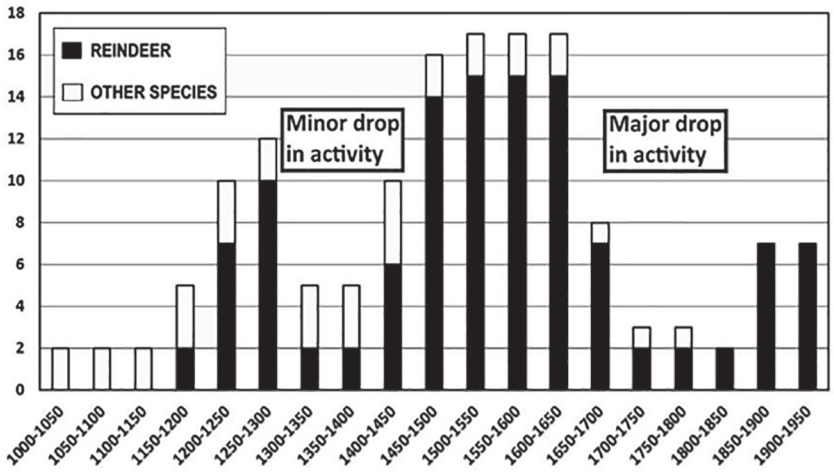


Figure 4.3: Histogram of the ranges (2σ) of the dates in Figure 2, grouped according to their spread in 50-year intervals between 1000 and 1950.

be due to reservoir effects. The swan has a very strong marine $\delta^{13}C$ signal (-11.9‰) and the pike could come from a small carbonate-rich basin. On the other hand, a similar situation involving the early occurrence of bear was observed at the Unna Saiva *sieidi* (Salmi et al. 2015). At this point it is difficult to say whether these early dates constitute a true reflection of Saami-animal interaction or not.

4.5 Stable isotope analyses

The SIA results of the *sieidi* samples are presented in Figure 4.4 and Appendix 4.1. With the exception of the swan, which is obviously a migratory marine visitor, all the analyzed species show clear terrestrial signals in their $\delta^{13}C$ (mean±s.d. –20.4 ±1.4), which reflect the inland location. The relative positions of the $\delta^{15}N$ values of the different species agree with their respective diets. Trophically lowest are the seed/needle eating grouses with $\delta^{15}N$ values within 0-1‰, highest are the pike and the bear around

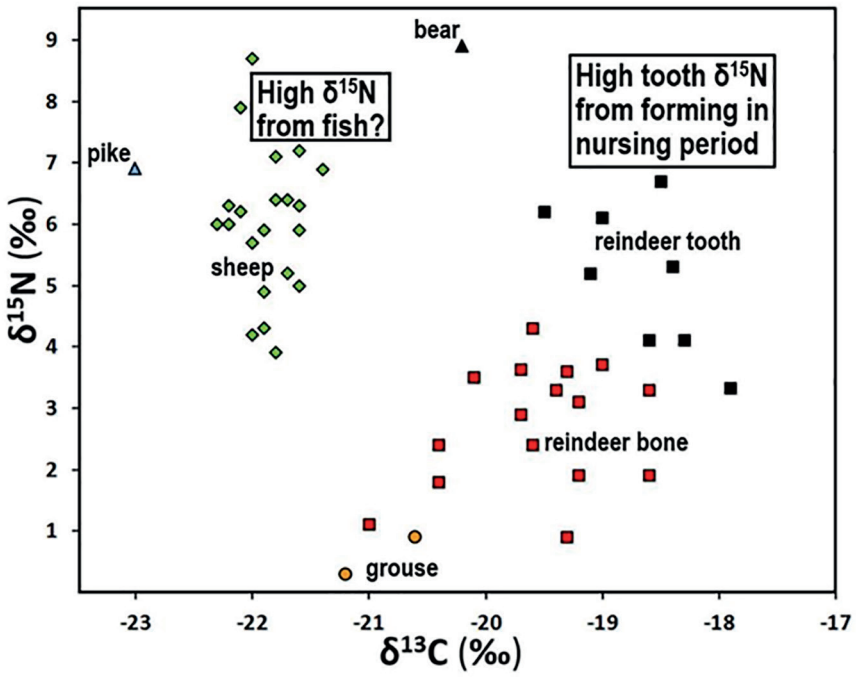


Figure 4.4: Plot of the SIA results from the studied sieiddit.

7-9‰. The $\delta^{15}N$ of the herbivores, 21 sheep and 23 reindeer, fall between the mentioned trophically highest and lowest taxa with rather broad ranges. The results fit well with the expected values from this geographic area (Table 4.2; cf. also Lidén and Nelson 1994; Etu-Sihvola et al. 2019). As is to be expected, T-tests showed that the sheep $\delta^{13}C$ and $\delta^{15}N$ values differ significantly from those of reindeer (p=.00001 for both isotopes), but the geology-related δ34S values do not (Appendix 4.1).

Table 4.2: Comparative $\delta^{13}C$ and $\delta^{15}N$ values of ovicaprids and reindeer as well as some baseline figures from elk and cod and their sources: (1) Naumann et al. 2014b; (2) Naumann et al. 2014a; (3) Salmi et al 2015; (4) Spangen and Fjellström 2018; (5) Lahtinen and Salmi 2018; (6) Linderholm et al. 2008; (7) Sayle et al. 2013; (8) Fjellström 2011; (9) Etu-Sihvola et al. 2019; (10) Barret et al. 2008. LIA = Late Iron Age.

Species	Site / Region	Period	N	$\delta^{13}C$	$\delta^{15}N$	Ref.
Sheep	Bodø, Arctic Norway	LIA	1	–22.2	3.6	1
Sheep	Flakstad, Arctic Norway	LIA	1	–22.3	3.6	2
Ovicaprid	Flakstad, Arctic Norway	LIA	1	–21.6	3.7	2
Ovicaprid	Unna-Saiva, Swed. Lapland	1270–1400	1	–21.9	5.4	3
Ovicaprid	Beajalgŋai, Swed. Lapland	1400–1520	1	–18.6	11.3	4
Ovicaprid	Oulu, North Finland	1600–1900	1	–22.0	5.0	5
Ovicaprid	Oulu, North Finland	1600–1900	1	–21.7	7.4	5
Ovicaprid	Björned, North Sweden	LIA	1	–21.3	3.3	6
Ovicaprid	Björned, North Sweden	LIA	1	–21.6	7.8	6
Ovicaprid	Skútustaðir, Iceland	LIA	48	–21.2±0.4	2.5±1.1	7
Reindeer	Unna-Saiva, Swed. Lapland	1270–1640	6	–19.3±0.4	4.7±0.7	3
Reindeer	Könkämä, Swed. Lapland	c.1900	5	–20.5±0.3	2.6±0.6	8
Reindeer	Rovaniemi, Central Lapland	Modern	1	–20.1	3.9	5
Reindeer	Tornio, coastal Lapland	1500–1800	1	–19.0	4.1	5
Reindeer	Tornio, coastal Lapland	1500–1800	1	–21.2	3.0	5
Reindeer	Oulu, coastal Ostrobothnia	1600–1900	1	–19.6	5.5	5
Elk	Finland	Modern	5	–22.1±0.4	3.3±1.2	9
Elk	Sweden	Modern	20	–22.0±1.0	3.3±1.0	9
Cod	Arctic Norway	Medieval	4	–14.9±0.5	14.3±0.3	10

4.5.1 Sheep

The 21 sheep samples come from a single site and show a tight $\delta^{13}C$ range (–21.9 ±0.2‰) and a wide $\delta^{15}N$ range (6.0 ±1.2‰). The large standard deviation (1.2‰) implies high variability in the Inari sheep diet.

One could expect some variability in the Inari sheep due to different feeding practices in the various households where the sheep were raised, also taking into account the six centuries involved. Sheep are not an arctic species and depend on their keepers to survive in winter. Early 19th-century sources indicate that, to compensate for hay shortage, sheep and cattle were winter-fed with a gruel (*moska*) made of grasses, horsetails, birch/pine shoots, lichens and fish waste gathered during summer (Fellman 1906 [1820s]: 36,55; Paulaharju 1921: 97–98, 1927: 93–94; Itkonen 1948 II: 186–188).

The proportion of the gruel components would have varied from household to household and year to year, leading to the observed wide $\delta^{15}N$ range. Those individuals with lowest $\delta^{15}N$ values would have received more lichen, those with highest values more fish. It is unclear if these feeding practices go back to the 14th century, but sheep winter fodder consisting of fish and seaweed was recorded in northern Norway in the late 1500s (Bratrein 1974), and an even greater antiquity is suggested by the recently described 15th-century ovicaprid from the Beajalgŋai *sieidi*, c.100 km from Inari (Spangen and Fjellström 2018). The Beajalgŋai sheep has higher $\delta^{13}C$ and $\delta^{15}N$ values (–18.6‰ and 11.3‰) than the Inari maxima (–21.4‰ and 8.7‰) and is compatible with the consumption of marine fish and seaweed described by Bratrein (1974). The Inari sheep values, on the other hand, reflect the local freshwater fish and lichens described in Finnish sources. See Table 2 for comparative sheep/ovicaprids isotopic values.

The continuous occurrence of sheep from the 14th through 17th century and their strong terrestrial values suggest that they were locally raised in the Inari area. The non-nomadic, fishing-oriented lifeways of the Inari Saami (Itkonen 1948) would have been compatible with keeping a couple of sheep per family.

4.5.2 Reindeer

One would be tempted to attribute the wide spread of reindeer isotope values to their extremely variable diet and the large territory and long period involved, but the observed $\delta^{15}N$ wide range is obviously caused by the few tooth samples, which have higher values than those of bone (Figure 4.4, Appendix 4.1). The reason for higher $\delta^{15}N$ values in teeth has to do with having been formed, at least partly, during the suckling period. Similar elevated isotopic values of molars with respect to bone were also observed in North American caribou (Drucker et al. 2001, 2012). T-tests showed significant differences between the isotope values of the tooth and bone samples ($p=.00121$ for $\delta^{13}C$ and $p=.000016$ for $\delta^{15}N$).

Although the reindeer samples come from four sites, T-tests showed no significant differences in the $\delta^{13}C$ and $\delta^{15}N$ values. However, there are significant differences between the $\delta^{13}C$ values of those reindeer samples AMS-dated before AD 1600 and those with more recent dates ($p=.002044$), which may be a reflection of the human-reindeer interaction processes that took place in Finnish Lapland during 1200-1900. For comparative reindeer isotope values see Table 2.

4.6 Isotopes and human-reindeer relations in Finnish Lapland 1200–1900 AD

The lack of interest in the origins of reindeer herding practices among Finnish archaeologists may be blamed on being introduced as a 'ready package', but that does not make the event any less interesting. The conditions in Finnish Lapland in 1650–1900 may hold similarities to the earlier farmer-forager contact scenarios and the processes of adopting reindeer herding practices that took place in Norway and Sweden during the preceding centuries.

This brings us to the questions of whether changes in the proportions of different reindeer categories (wild, herded, household) may be represented in the *sieidi* material and, if so, whether the differences can be detected isotopically. The latter is not so farfetched. Household reindeer were valuable and lived in close contact with their owners, who made sure that they were well fed year-round. Herded reindeer were semi-wild. Their diet may have been more varied than that of household animals, but was nonetheless human-controlled to some degree. They represented both livelihood

and wealth, and their well-being was insured by guiding them to suitable grazing grounds and, most importantly, providing them with the necessary food in winter. Wild reindeer, on the other hand, were free to roam and browse opportunistically. Even if they consumed the same plant taxa as their herded counterparts, they had to cope by themselves with natural food fluctuations, particularly during bad winters. One would therefore expect wild reindeer to be associated with more heterogeneous diets than herded and household reindeer. Based on these premises and on what is known from written sources, one can expect the proportions between the three reindeer categories in Finnish Lapland to have evolved in the following manner:

1200: There are no written sources from this time, but we can safely assume that the reindeer population of Finnish Lapland was dominated by wild reindeer, which were hunted, and a very small percentage of household animals used for transport/hunting purposes.

1200–1600: Wild reindeer continued to dominate. There may have been a slight influx of herded reindeer from the west at the very end of the period, but the reindeer inventories show that the number of tame reindeer was still rather modest in 1605: no more than 4 reindeer per household (Hultblad 1968; Nieminen 2013).

1600–1900: The proportion of herded reindeer increased gradually during the 1600s and 1700s, and at an even faster rate in the 1800s as wild reindeer populations declined and collapsed. Around 1800 many Saami families in Finnish Lapland owned over 200 reindeer, the richest of them 1000-2000. By the end of the 19th century, wild reindeer had become extinct in Finnish Lapland, which means that all the reindeer were either herded or household animals. (Aurén 1894; Itkonen 1948; Tegengren 1952; Storå 1971; Pulliainen and Leinonen 1990).

1900: Only herded reindeer and a small percentage of household animals.

On this basis, we should expect a greater variability in the isotope values among the reindeer offered at the *sieiddit* before 1600, when most reindeer were wild and herding practices had not begun to spread into Finnish Lapland. After 1600, the variability of isotopic values should decrease as the proportion of herded reindeer increases, first gradually and later faster, culminating with the disappearance of wild reindeer. Around 1900, only tame reindeer would be offered at the *sieiddit*.

The diagram of Figure 4.5 seems to reflects these developments. When reindeer $\delta^{13}C$ values are plotted against the medians of their calibrated AMS-dates, one can observe a greater variability before 1600 than after. The difference is particularly obvious around 1900, when wild reindeer had become

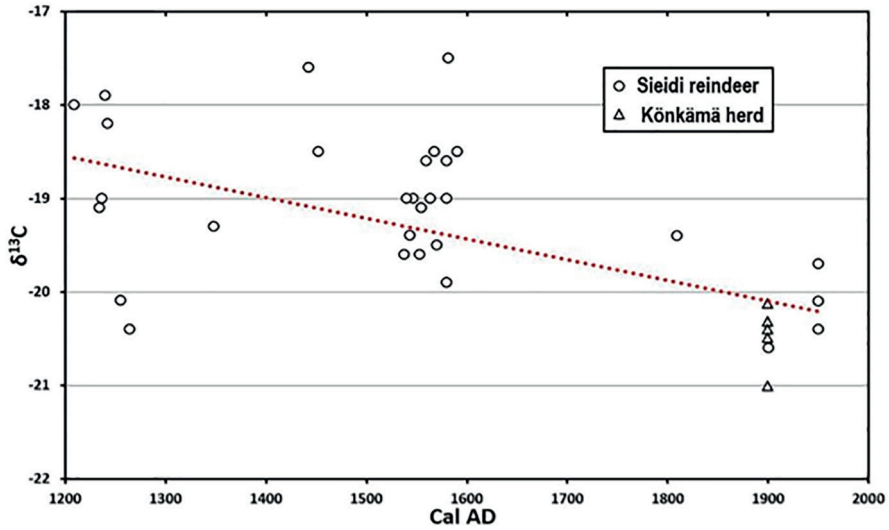


Figure 4.5: Plot of all the reindeer $\delta^{13}C$ values (circles) against the median of their AMS calibration ranges. Fjellström's (2011) results of five modern herded reindeer (c. 1900) from the Könkämä Saami village in Sweden (triangles) were added for comparison. Trend line: y= -0.002x -16.192.

extinct. Moreover, the somewhat lower $\delta^{13}C$ values around 1900 suggest a diet with less lichens than in earlier periods (see the trendline in Figure 5), which also agrees with herding practices. A similar treatment of the $\delta^{15}N$ shows the expected opposite trend, suggesting again less lichens; but the $\delta^{15}N$ data are badly disturbed by the high tooth values.

Summing up, the distribution of reindeer carbon and nitrogen isotopic values through time seems to reflect the historical facts: Reindeer herding spread into Finnish Lapland after 1600, becoming fully established by 1900. The correlations shown here may be useful in future research, but it must be borne in mind that stable isotopes can only provide indications. They will not determine whether one reindeer is wild or domesticated (cf. Balasse et al. 2018), but may be useful in certain cases. By far the best potential for determining the introduction of reindeer herding practices in the various parts of northern Fennoscandia would be aDNA analyses, but that still requires technique improvements and lots of analyses. Recent research seems to be moving in that direction (Røed et al. 2008, 2018; Bjørnstad et al. 2012; Heino et al. forthcoming).

4.7 Final remarks

After describing and briefly discussing the laboratory results of animal bone samples from seven sieidi sites in Finnish Lapland, we present the following summarizing remarks:

- The utilization of at least six of the seven studied *sieiddit* had begun by AD 1300 and continued with varying intensity throughout the 19th century. A clear drop in votive activity seems to have taken place in the 17th-century.
- The *sieidi* fauna was dominated by reindeer (52% MNI), followed by grouse (19% MNI) and sheep (18% MNI). Fish and bird bones were less common, but they may be taphonomically affected.
- The Inari Saami were apparently raising sheep 300–400 years earlier than previously thought. Their abundance and chronological distribution suggest that they were being raised in Inari by AD 1400.
- The stable carbon and nitrogen isotope results of the *sieidi* species and are in agreement with other results from northern Fennoscandia.
- The high $\delta^{15}N$ values of some sheep suggest the consumption of animal protein, which could be explained if they had been fed freshwater fish in winter. Such practices were recorded in Inari in the 1820s and in northern Norway in the late 16th century. Similar SIA results were observed in a 15th-century ovicaprid sample from Swedish Lapland.
- When the $\delta^{13}C$ values of the reindeer samples are plotted against their AMS dates, they show correspondence to what is known about the history of Saami-reindeer interaction in Finnish Lapland during AD 1200–1900.
- The reindeer offered before 1600 appear to have had more variable diets than those offered later, which is compatible with wild reindeer. This contrasts with the more uniform diets after 1600, particularly, around 1900, when wild reindeer were extinct and all the offered reindeer would have been herded or household animals.
- The lower $\delta^{13}C$ values of the reindeer offered around 1900 suggests a diet with less lichens than in earlier centuries, which may also reflect herding practices.
- By far the most important contribution of the project and this paper are the generated data, which can be used by others in future research: a total of 41 AMS dates and 49 stable isotope determinations from the remains of animals offered at seven *sieidi* sites in Finnish Lapland during AD 1100–1900.

Acknowledgements

This article is dedicated to our colleague, the late **Dr Minna Ruokonen***, who was instrumental in the DNA identification of the sieidi ovricapids as sheep. Thanks are due to* **the Samediggi** *(Sámi Parliament of Finland) for permitting the study of the sieidi sites, to the staff and students that participated in the investigations, and to our partner institutions:* **the Oulu Biology Department, the Giellagas Institute, the Sámi Siida Museum, the Finnish Heritage Agency, the National Forest Bureau, the Archaeological Research Laboratory of Stockholm University** *and* **the Laboratory of Chronology of Helsinki University***. Last but not least, our gratitude goes to* **the Finnish Academy** *for the generous grant (122623) that made this research possible.*

Appendix 4.1: AMS and SIA results from the studied sieidi sites with their numbers (cf. Fig.1), species and materials involved, the AMS lab numbers and dates (BP and cal AD), and the SIA results from Helsinki and Stockholm. Whenever possible we preferentially used the Stockholm $\delta^{13}C$ and $\delta^{15}N$ results for the diagram of Figure 4 because they also involve the sheep samples; otherwise we used the Helsinki Batch 2 results. For the diagram of Figure 5 we used the same $\delta^{13}C$ results from Stockholm and Helsinki used for Figure 4, but also included the seven single $\delta^{13}C$ from Helsinki Batch 1. All the results employed in Figures 4 and 5 have been enhanced in bold. The AMS dates have been corrected for isotopic fractionation to correspond to a $\delta^{13}C$ of -25‰. The SIA were done with a Finnigan MAT52 at Helsinki (both batches) and a Finnigan MAT Delta+ at Stockholm.

Site	Species	Material	Lab number	Date BP	Date cal AD	HELSINKI			STOCKHOLM		
						Batch 1	Batch 2				
						$\delta^{13}C$	$\delta^{13}C$	$\delta^{15}N$	$\delta^{13}C$	$\delta^{15}N$	$\delta^{34}S$
3	pike	bone	Hela-1878	900±25	1040–1220	–23.5	–23.0	6.92			
2	swan	bone	Hela-1755	875±30	1040–1230	–11.9					
4	bear	tooth	Hela-1885	830±25	1165–1260	–19.9	–19.6	8.90	–20.2	8.9	9.9
5	reindeer	tooth	Hela-1896	830±25	1165–1260	–18.0					
5	reindeer	bone	Hela-1890	800±25	1185–1275	–19.5	–19.1	2.06	–19.2	1.9	12.8
4	reindeer	bone	Hela-1882	795±25	1205–1280	–19.6	–19.0	3.32	–19.3	3.6	10.9
4	reindeer	tooth	Hela-1883	785±25	1215–1280	–18.7	–17.9	3.32			
4	reindeer	tooth	Hela-1884	780±25	1215–1280	–18.9	–18.2	3.44	–18.4	5.3	11.0
4	reindeer	bone	Hela-1886	740±30	1220–1290	–20.5			–20.1	3.5	12.0
5	reindeer	bone	Hela-1892	740±25	1225–1290	–20.9	–20.4	1.05	–21.0	1.1	15.2
6	grouse	bone	Hela-2195	655±30	1279–1393		–21.2	0.31			
2	reindeer	bone	Hela-1756	600±25	1290–1410	–19.3					
2	sheep	bone	Hela-1754	570±25	1300–1420	–20.6					
5	reindeer	bone	Hela-1891	575±25	1300–1420	–19.7	–19.4	1.02	–19.3	0.9	13.1
1	sheep	bone	Hela-1257	540±30	1315–1440	–20.2					
1	grouse	bone	Hela-1221	490±30	1400–1450	–21.6					
1	reindeer	bone	Hela-1220	445±30	1415–1490	–17.6					
1	sheep	bone	Hela-1433	444±25	1420–1485	–19.6					
5	reindeer	bone	Hela-1894	425±25	1420–1620	–18.9	–18.5	2.00	–18.6	1.9	11.4
6	reindeer	bone	Hela-2200	367±30	1448–1634		–19.6	4.32			
6	reindeer	tooth	Hela-2198	362±30	1450–1634		–19.0	6.07			
1	reindeer	bone	Hela-1219	350±30	1455–1635	–19.0					
6	reindeer	bone	Hela-2199	338±30	1472–1640		–19.6	2.35			
6	reindeer	tooth	Hela-2194	333±30	1475–1641		–19.1	5.18			
6	reindeer	tooth	Hela-2196	325±30	1480–1644		–18.6	4.11			
1	sheep	bone	Hela-1432	330±25	1480–1650	–21.2					
5	reindeer	bone	Hela-1893	325±25	1480–1650	–19.4	–19.0	3.33	–19.2	3.1	10.6
6	reindeer	tooth	Hela-2197	313±30	1486–1648		–18.5	6.67			
6	reindeer	tooth	Hela-2201	309±30	1487–1649		–19.5	6.21			
5	reindeer	bone	Hela-1895	295±30	1490–1660	–19.5	–19.0	3.65			
5	reindeer	bone	Hela-1897	295±25	1490–1660	–20.2	–19.9	2.21	–19.7	2.9	12.8
5	reindeer	bone	Hela-1898	295±25	1490–1660	–19.0	–18.6	3.31			
5	reindeer	tooth	Hela-1889	290±25	1510–1660	–18.2	–17.5	3.40			
1	reindeer	bone	Hela-2494	276±30	1513–1667	–18.5					
6	grouse	bone	Hela-2202	259±30	1520–1799		–20.6	0.94			
7	reindeer	antler	Hela-2514	90±30	1685–1928	–21.7					

3	reindeer	bone	Hela-1880	80±25	1690-1920	–20.1	–19.4	3.33			
3	reindeer	bone	Hela-1879	modern	modern	–21.1	–20.4	2.43			
4	reindeer	bone	Hela-1881	modern	modern	–20.7	–20.1	1.76	–20.4	1.8	11.6
4	reindeer	bone	Hela-1887	modern	modern	–20.0	–19.7	3.63			
7	reindeer	antler	Hela-2513	modern	modern	–20.6					
1	sheep	bone							–22.2	6.3	3.8
1	sheep	bone							–21.6	7.2	5.8
1	sheep	bone							–22.0	4.2	5.9
1	sheep	bone							–21.9	4.9	8.0
1	sheep	bone							–21.7	5.2	4.0
1	sheep	bone							–21.9	5.9	6.0
1	sheep	bone							–22.3	6.0	6.8
1	sheep	bone							–21.6	5.0	5.0
1	sheep	bone							–21.4	6.9	10.8
1	sheep	bone							–21.8	3.9	2.0
1	sheep	bone							–22.2	6.0	0.4
1	sheep	bone							–21.8	6.4	6.3
1	sheep	bone							–21.9	4.3	3.1
1	sheep	bone							–22.0	8.7	0.0
1	sheep	bone							–21.8	7.1	4.4
1	sheep	bone							–22.1	6.2	2.7
1	sheep	bone							–22.1	7.9	3.9
1	sheep	bone							–22.0	5.7	7.5
1	sheep	bone							–21.6	5.9	3.5
1	sheep	bone							–21.6	6.3	11.5
1	sheep	bone							–21.7	6.4	4.7

Bibliography

Äikäs, T. 2009. Landscape archaeology and Sámi ritual landscapes. Examples from Ukonsaari, Juuvaara and Taatsi. In P. Halinen, M. Lavento, and M. Suhonen (eds.): *Recent Perspectives on Sámi Archaeology in Fennoscandia and North-West Russia. Proceedings of the First International Conference on Sámi Archaeology, Rovaniemi, 19–22 October 2006*, pp. 25–33. ISKOS 17. Helsinki: Finnish Antiquarian Society.

Äikäs, T. 2011. *Rantakiviltä tuntureille – Pyhät paikat saamelaisten rituaalisessa maisemassa*. Studia archaeologica septentrionalia 5. Rovaniemi: Pohjois-Suomen historiallinen yhdistys.

Äikäs, T. 2015. *From Boulders to Fells. Sacred Places in the Sámi Ritual Landscape*. Translated by S. Silvonen. Monographs of the Archaeological Society of Finland 5. Helsinki: Archaeological Society of Finland. Available at: http://www.sarks.fi/masf_5/masf_5.html.

Äikäs, T. and M. Núñez. 2009a. *Kittilän Taatsi. Tutkimuskertomus seitakohteen arkeologisista kaivauksista*. Unpublished excavation report. Laboratory of Archaeology (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Äikäs, T. and M. Núñez. 2009b. *Enontekiön Näkkälä. Tutkimuskertomus seitakohteen arkeologisista kaivauksista*. Unpublished excavation report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Äikäs, T. and M. Núñez. 2009c. *Utsjoen Seitala. Tutkimuskertomus seitakohteen arkeologisista kaivauksista*. Unpublished report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Äikäs, T. and M. Núñez. 2010. *Inarin Koskikaltiojoen suu. Tutkimuskertomus seitakohteen arkeologisista kaivauksista*. Unpublished excavation report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Äikäs, T. and M. Núñez. 2011a. *Dierpmesvárri. Tutkimuskertomus seitakohteen arkeologisista kaivauksista*. Unpublished excavation report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Äikäs, T. and M. Núñez. 2012. *Luiden palautus. Raportti luiden palauttamisesta neljälle seitakohteelle sekä näytteidenotosta*. Unpublished report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Äikäs, T, A-K. Puputti, M. Núñez, J. Aspi, and J. Okkonen, 2009. Sacred and profane livelihood: Animal bones from sieidi sites in Northern Finland. *Norwegian Archaeological Review* 42(2): 109–122.

Aurén, P. W. 1894. *Uleåborgs län. Resedagboksanteckningar i länet samt under 12 års tjänstgöring i Lappmarken. Första delen Anteckningar om Utsjoki, Enare och Sodankylä*. Uleåborg: Uleåborgs Tryckeri.

Balasse, M, T. Cuchi, A. Evin, A. Bălăşescu, D. Frémondeau, and M-P. Horard-Herbin. 2018. Wild game or farm animal? Tracking human-pig relationships in ancient times through stable isotope analysis. In C. Stépanoff. and J-D. Vigne (eds.): *Hybrid Communities. Biosocial Approaches to Domestication and Other Trans-Species Relationships*, pp. 81–96. Routledge studies in anthropology 46. London: Routledge.

Barrett, J, C. Johnstone, J. Harland, W. Van Neer, A. Ervynck, D. Makowiecki, D. Heinrich, A. K. Hufthammer, I. Bødker Enghoff, C. Amundsen, J. S. Christiansen, A. K. G. Jones, A. Locker, S. Hamilton-Dyer, L. Jonsson, L. Lõugas, C. Roberts, and M. Richards. 2008. Detecting the medieval cod trade. A new method and first results. *Journal of Archaeological Science* 35(4): 850–861.

Bately, J. and A. Englert. (eds.) 2007. *Ohthere's Voyages. A Late 9th-Century Account of Voyages along the Coasts of Norway and Denmark and Its Cultural Context*. Maritime culture of the north 1. Roskilde: The Viking Ship Museum.

Bergman, I, A. Olofsson, G. Hörnberg, O. Zackrisson, and E. Hellberg. 2004. Deglaciation and colonization. Pioneer settlements in northern Fennoscandia. *Journal of World Prehistory* 18(2): 155–177.

Bjørklund, I. 2013. Domestication, reindeer husbandry and the development of Sámi pastoralism. *Acta Borealia* 30(2): 174–189.

Bjørnstad, G, T. Flagstad, A. K. Hufthammer, and K. H. Røed. 2012. Ancient DNA reveals a major genetic change during the transition from hunting economy to reindeer husbandry in northern Scandinavia. *Journal of Archaeological Science* 39(1): 102–108.

Bläuer, A, L. Arppe, M. Niemi, M. Oinonen., K. Lidén, J-P. Taavitsainen, and J. Kantanen. 2016. Inferring prehistorical and historical feeding practices from $\delta^{15}N$ and $\delta^{13}C$ isotope analysis on Finnish archaeological domesticated ruminant bones and teeth. *Fennoscandia Archaeologica* 33: 171–188.

Bratrein, H. D. 1974. Tradisjonell utnytting av tang og tare i Nord-Norge. *Ottar* 82(2): 17–32.

Carpelan, C. 1979. Finskie saamy v zheleznom veke. In A. N. Kiprishnikov, B. A. Ribakov, and Y. A. Ryabinin (eds.): *Finno-ugry i Slavyane. Doklady nervogo sovetsko-finlyandskogo simposziuma po voprosam arkeologii 15−17 noyabrya 1976*, pp. 143–151. Leningrad: Nauka.

Carpelan, C. 1993. Comments on Sami Viking Age pastoralism – or "the fur trade paradigm" reconsidered. *Norwegian Archaeological Review* 26(1): 22–26.

Carpelan, C. 2003. Inarilaisten arkeologiset vaiheet. In V-P. Lehtola (ed.): *Inari – Aanaar. Inarin historia jääkaudesta nykypäivään*, pp. 28–95. Inari: Inarin kunta.

Castrén, E. 1754. *Historisk och Oeconomisk Beskrifning öfwer Cajanaborgslan*. Åbo: Merckell.

Drucker, D. G, H. Bocherens, A. Pike-Tay, and A. Mariotti. 2001. Isotopic tracking of seasonal dietary change in dentine collagen. Preliminary data from modern caribou. *Earth and Planetary Sciences* 333(5): 303–309.

Drucker, D. G, K. A. Hobson, S. C. Münzel, and A. Pike-Tay. 2012. Intra-individual variation in stable carbon ($\delta^{13}C$) and nitrogen ($\delta^{15}N$) isotopes in mandibles of modern caribou of Qamanirjuaq (*Rangifer tarandus groenlandicus*) and Banks Island (*Rangifer tarandus pearyi*). Implications for tracing seasonal and temporal changes in diet. *International Journal of Osteoarchaeology* 22(4): 494–504.

Erä-Esko, A. 1957. *Sodankylä Orajärvi Seitaniemi. 14.–16.7.1957*. Unpublished excavation report. Archives of the Finnish Heritage Agency. Helsinki: the Finnish Heritage Agency.

Eriksson, G, A. Linderholm, E. Fornander, M. Kanstrup, P. Schoultz, H. Olofsson, and K. Lidén. 2008. Same island, different diet. Cultural evolution of food practice on Öland, Sweden, from the Mesolithic to the Roman Period. *Journal of Anthropological Archaeology* 27(4): 520–543.

Etu-Sihvola, H, H. Bocherens, D. G. Drucker, A. Junno, K. Mannermaa, M. Oinonen, J. Uusitalo, and L. Arppe. 2019. The dIANA database. Resource for isotopic paleodietary research in the Baltic Sea area. *Journal of Archaeological Science: Reports* 24: 1003–1013.

Fellman, J. 1906. *Anteckningar under min vistelse i Lappmarken*. I−IV. Helsingfors: Finska Litteratursällskapet.

Fjellström, M. 2011. *Stable sotope analysis and ethical issues surrounding a human skeleton material from Rounala in Karesuando parish*. MA-thesis. Stockholm: Stockholm University. Available at: http://www.diva-portal.org/smash/get/diva2:472224/FULLTEXT02 [visited 13 July 2016].

Forsberg, L. 1995. Saami archaeology in Sweden, 1985−1990. An overview. *Current Swedish Archaeology* 3: 97–104.

Furset, O. 1995. Fangstgroper og ildsteder i Kautokeino kommune. Rapport fra forskningsutgraving 24 juli−3 september 1994. *Institutt for Samfunnsvitenskap* 37. Tromsø: University of Tromsø.

Furset, O. 1996. *Fangstgroper i Karasjok kommune. Rapport fra forskningsutgraving 3 juli−4 august 1995.* Institutt for Samfunnsvitenskap 39. Tromsø: University of Tromsø.

Halinen, P. 2005. *Prehistoric Hunters of Northernmost Lapland. Settlement Patterns and Subsistence Strategies.* ISKOS 14. Vammala: Finnish Antiquarian Society.

Halinen, P. 2006. Maaperänäytteitä seidan juurelta. *Muinaistutkija* 2: 2–6.

Halinen, P. 2010. Saamelaisten pyhät paikat rajalla. *Suomen Museo* 116: 39–57.

Hallström, G. 1921. Gravplatser och offerplatser i ryska lappmarken I. In E. Hammarstedt, S. Ambrosiani, S. Erixon, and G. Hallström (eds.): *Etnologiska studier tillägnade Nils Edvard Hammarstedt*, pp. 183–194. Föreningen för Svensk Kulturhistoria 1919: 2. Stockholm: Föreningen för svensk kulturhistoria.

Hallström, G. 1922. Gravplatser och offerplatser i ryska lappmarken II. *Rig* 5: 162–192.

Hallström, G. 1932. Lapska offerplatser. In N. Edén (ed.): *Arkeologiska studier tillägnade H.K.H. Kronprins Gustaf Adolf*, pp. 111–131. Stockholm: P. A. Norstedt.

Hansen, L. I. 1990. *Handel i nord. Samiske samfunnsendringer ca.1550 – ca.1700*. Oslo: Novus.

Hansen, L. I. and B. Olsen. 2006. *Samernas historia fram till 1750*. Stockholm: Liber.

Hansen, L. I. and B. Olsen. 2014. *Hunters in Transition. An Outline of Early Sámi History*. Northern world 63. Leiden: Brill.

Harlin, E-K. 2007. *Inari 53 Ukonsaari osteoarkeologinen analyysi*. Unpublished osteological analysis report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Harlin, E-K. and E. Ojanlatva. 2008. *Inarin Ukonjärven Ukon kenttätutkimus 2007*. Unpublished excavation and osteological analysis report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Heino, M. 2010. Muinais-DNA -tutkimus Oulussa. *Muinaistutkija* 1/2010: 15–18.

Heino, M, A-K. Salmi, T. Äikäs, K. Mannermaa, T. Kirkinen, M. Sablin, M. Ruokonen, M. Núñez, J. Okkonen, D. Dalén, and J. Aspi. Forthcoming. *Replacement of wild reindeer genetic lineages by domestic ones at Sámi offering sites in Finland in ca. 1400 AD* (submitted).

Helskog, K. 2011. Reindeer corrals 4700−4200 BC: Myth or reality? *Quaternary International* 238(1−2): 25–34.

Helskog, K. 2012. Ancient depictions of reindeer enclosures and their environment. *Fennoscandia Archaeologica* 29(1): 29–54.

Holmberg, U. 1915. *Lappalaisten uskonto*. Porvoo: Werner Söderström.

Holmberg, U. 1964. *Finno-Ugric, Siberian. The Mythology of all Races.* Vol IV. New York: Copper Square.

Hultblad, F. 1968. *Overgång från nomadism till agrar bosättning i Jokkmokks socken*. Acta Lapponica 14. Stockholm: Almqvist & Wiksell.

Itkonen, T. 1945. *Keminlapin apostolit J. Pictorius, E. Fellman ja G. Tuderus. Piirteitä 1600-luvun lapinlähetyksestä*. Lapin sivistysseuran julkaisuja 14. Helsinki: Lapin sivistysseura.

Itkonen, T. I. 1946. *Heidnische Religion und späterer Aberglaubebei den finnischen Lappen*. Mémoires de la Société Finno-ougrienne 87. Helsinki: Suomalais-ugrilainen seura.

Itkonen, T. I. 1948. *Suomen lappalaiset vuoteen 1945*. Vol. I−II. Porvoo: Werner-Söderström.

Itkonen, T. I. 1962. Kuivi, ein heiliger Ort der Lappen. In P. Ravila (ed.): *Commentationes Fenno-Ugricae in honorem Paavo Ravila*, pp. 127–138. Mémoires de la Société Finno-ougrienne 125. Helsinki: Suomalais-ugrilaisen seuran.

Lahtinen, M. and A-K. Salmi. 2018. Mixed livelihood society in in Hamina. A case study of medieval diet in Northern Ostrobothnia, Finland. *Environmental Archaeology* 4(1): 1–14.

Lidén, K. and E. D. Nelson. 1994. Stable carbon isotopes as dietary indicator, in the Baltic area. *Fornvännen* 8(1): 13–21.

Linderholm, A, K. Andersson, C-M. Mörth, L. Grundberg, B. Hårding, and K. Lidén. 2008. An early Christian cemetery at Björned in northern Sweden. Stable isotope analyses of skeletal material. *Fornvännen* 103(3): 176–189.

Lundmark, L. 1982. *Uppbörd, utarmning, utveckling. Det samiska fångstsamhällets övergång till rennomadism i Lule lappmark.* Arkiv avhandlingsserie 14. Lund: Arkiv Academic Press.

Magnus [Magno Gotho], Olaus. 1555. *Historia de Gentibus Septentrionalibus*. Rome.

Manker, E. 1957. *Lapparnas helliga ställen. Kultplasser och offerkult i belysning av Nordiska museets och Landsantikvarernas fältundersökningar*. Acta Lapponica 13. Stockholm: Gebers.

Manker, E. 1968. Seite cult and drum magic of the Lapps. In V. Dioszegi (ed.): *Popular beliefs and folklore tradition in Siberia*, pp. 27–40. Uralic and Altaic series 57. The Hague:Mouton. .

Mebius, H. 1968. *Värro. Studier i samernas förkristna offerriter*. Skrifter utgivna av Religionshistoriska Institutionen i Uppsala 5. Uppsala: Almqvist & Wiksell.

Melander, K. R. 1920. Hirvieläimistä Suomessa ynnä niitten pyytämisestä 16. ja 17. vuosisadalla. *Historiallinen arkisto* 28(2): 1–67

Mulk, I. M. 2009. From metal to meat. Continuity and change in ritual practices at a Saami offering place, Viddjavárri, Lapland, northern Sweden. In T. Äikäs (ed.): *Máttut-Máddagat. The Roots of Saami Ethnicities, Societies and Spaces/Places*, pp. 116–133. Publications of the Giellagas Institute 12. Oulu: University of Oulu.

Naumann, E, M. Krzewińska, A. Götherström, and G. Eriksson. 2014a. Slaves as burial gifts in Viking Age Norway? Evidence from stable isotope and ancient DNA analyses. *Journal of Archaeological Science* 41: 533–540.

Naumann, E, D. Price, and M. P. Richards. 2014b. Changes in dietary practices and social organization during the pivotal Late Iron Age period in Norway (AD 550−1030). Isotope analyses of Merovingian and Viking Age human remains. *American Journal of Physical Anthropology* 155(3): 322–331.

Negri, F. 1750 [1660s]. *Viaggio Septentrionale*. Forli: Stampero Camerale.

Nieminen, M. 2013. *Suomen porotutkimus. Tutkittua tietoa poronhoitoon.* RKTL:n työraportteja 11/2013. Helsinki: Riista- ja kalatalouden tutkimuslaitos.

Nordman, C. A. 1922. Silverringen från Ukonsaari i Enare. *Finskt Museum* 1922: 1–10.

Núñez, M. 1991. On the Tornio antler and the Palaeolithic-husbandry hypothesis. *Current Anthropology* 32(3): 330–331.

Núñez, M. 2019. Changing visions of the mythical reindeer in southern Europe. In S. Lipkin, T. Kallio-Seppä, A. Tranberg, and T. Väre (eds.): *Toinen jalka haudassa. Juhlakirja Juhani Kostetille,* pp. 168–177, Oulu: University of Oulu.

Okkonen, J. 2007. Archaeological investigations at the Sámi sacrificial site of Ukonsaari in Lake Inari. *Fennoscandia Archaeologica* 24(2): 29–38.

Paulaharju, S. 1921. *Kolttain maailta*. Helsinki: Kustannusosakeyhtiö Kirja.

Paulaharju, S. 1927. *Taka-Lappia*. Helsinki: Kustannusosakeyhtiö Kirja.

Paulaharju, S. 1932. *Seitoja ja seidan palvontaa*. Helsinki: Suomalaisen Kirjallisuuden Seura.

Pulliainen, E. and A. Leininen. 1990. *Petra. Karjalan peura*. Helsinki: Tammi.

Puputti, A-K. 2008a. *Kittilä Taatsi. Kesän 2008 luuaineiston analyysi*. Unpublished osteological report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Puputti, A-K. 2008b. *Enontekiö Näkkälä. Kesän 2008 luuaineiston analyysi*. Unpublished osteological report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Puputti, A-K. 2008c. *Utsjoki Seitala. Kesän 2008 luuaineiston analyysi*. Unpublished osteological report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Puputti, A-K. 2009. *Inari Koskikaltiojoen suun seita. Kesän 2009 luuaineiston analyysi*. Unpublished osteological report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Puputti, A-K. 2010. *Inari Ukonsaari 53 Vuoden 1968 kaivausten luuaineiston (KM18349:1-8) analyysi.* Unpublished osteological report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Qvigstad, J. 1926. *Lappische Opfersteine und heilige Berge in Norwegen.* Oslo etnografiske Museums skrifter 1:5. Oslo: Brøgger.

Rankama, T. and J. Kankaanpää. 2008. Eastern arrivals in postglacial Lapland. The Sujala site 10000 cal BP. *Antiquity* 82: 884–899.

Rankama, T. and P. Ukkonen. 2001. On the early history of the wild reindeer (*Rangifer tarandus L.*) in Finland. *Boreas* 30(2): 131–147.

Rheen, S. 1897 [1671]. *En kortt Relation om Lapparnes Lefwarne och Sedher, wijdskiepellsser, sampt i många stycken grofwe wildfarellser.* Bidrag till kännedom om de svenska landsmålen ock svenskt folkliv. Bd. 17:1. Uppsala: Harald Wretman.

Røed, K. H, I. Bjørklund, and B. J. Olsen. 2018. From wild to domestic reindeer. Genetic evidence of a non-native origin of reindeer pastoralism in northern Fennoscandia. *Journal of Archaeological Science* 19: 279–286.

Røed, K. H, Ø. Flagstad, M. Nieminen, Ø. Holand, M. Dwyer, N. Røv, and C. Vila. 2008. Genetic analyses reveal independent domestication origins of Eurasian reindeer. *Proceedings of the Royal Society Biological Sciences* 275(1645): 1849–1855.

Rydving, H. 1993. *The End of Drum-Time. Religious Change among the Lule Saami 1670s–1740s*. Acta Universitatis Upsaliensis. Historia 12. Uppsala: Uppsala University.

Rydving, H. and R. Kristoffersson. 1993. Några samiska offerplatser. *Fornvännen* 88: 195–210.

Salmi, A-K. 2011. *Enontekiö Dierpmesvárri. Kesän 2010 luuaineiston analyysi.* Unpublished osteological report. Archaeology Laboratory (net-accessible copy from the Finnish Heritage Agency). Oulu: University of Oulu.

Salmi, A-K. 2012. Kuusi peura Nitsijärven seidalta. Elämäntarinallinen lähestymistapa seidalle uhrattuihin eläimiin. In S. Niinimäki, A-K. Salmi, J-M. Kuusela, and J. Okkonen (eds.): *Stones, Bones & Thoughts. Festschrift in Honour of Milton Núñez*, pp. 190–198. Oulu: Milton Núñezin juhlakirjan toimituskunta.

Salmi, A-K, T. Äikäs, M. Fjellström, and M. Spangen. 2015. Animal offerings at the Sámi offering site of Unna Saiva. Changing religious practices and human-animal relationships. *Journal of Anthropological Archaeology* 40: 10–22.

Salmi, A-K, T. Äikäs, M. Spangen, M. Fjellström, and I. M. Mulk. 2018. Tradition and transformation in Sámi animal-offering practices. *Antiquity* 92(362): 472–489.

Sarvas, A. 1971. *Inari Ukonsaari. Kaivaus uhriluolassa ja sen ympäristössä elokuussa 1968.* Unpublished excavation report. Helsinki: Finnish Heritage Agency.

Sayle, K. L, G. T. Cook, P. L. Ascough, H. R. Hastie, Á. Einarsson, T. H. McGovern, M. T. Hicks, Á. Edwald, and A. Friðriksson. 2013. Application of ^{34}S analysis for elucidating terrestrial, marine and freshwater ecosystems. Evidence of animal movement/husbandry practices in an early Viking community around Lake Mýtvatn, Iceland. *Geochimica et Cosmochimica Acta* 120: 531–544.

Schefferus, J. 1673. *Lapponia*. Francofurti: Christian Wolffi.

Serning, I. 1956. *Lapska offerplatsfynd från järnålder och medeltid i de svenska lappmarkerna*. Acta Lapponica 11. Stockholm: Hugo Geber.

Siivonen, L. I975. New results on the history and taxonomy of the mountain, forest, and domestic reindeer in northern Europe. In J. R. Luick (ed.): *Proceedings of the first International Reindeer and Caribou Symposium, 9−11 August 1972*, pp. 33–40. Biological Papers of the University of Alaska 1. Fairbanks: University of Alaska.

Sommerseth, I. 2011. Archaeology and the debate on the transition from reindeer hunting to pastoralism. *Rangifer* 31(1): 111–128.

Spång, L. G. 1991. Prehistoric use of pitfalls in Åsele Lappmark. *Readings in Saami History, Culture and Language* 2: 1–29.

Spangen, M. and M. Fjellström. 2018. A fishy tale about a sheep and a dog. Isotope studies and medieval Sámi mobility and husbandry in inner Finnmark, northern Norway. *Fennoscandia Archaeologica* 35: 3–17.

Storå, N. 1971. *Burial customs of the Skolt Lapps*. FF Communications 210. Helsinki: Suomalainen Tiedeakatemia.

Storli, I. 1996. On the historiography of Sami reindeer pastoralism. *Acta Borealia* 13(1): 81–115.

Tegengren, H. 1952. En utdöd lappkultur i Kemi lappmark. Studier i Nordfinlands kolonisationshistoria. *Acta Academiae Aboensis* 19:4. Åbo: Akademi.

Vorren, Ø. and H. K. Eriksen. 1993. *Samiske offerplasser i Varanger.* Tromsø Museums skrifter 24. Stonglandseidet: Nordkalott-Forlaget.

Wegelius, H. S. 1754. *Oeconomia & Morbus Incolarum Lapponiæ Kimiensis*. Abo: Merckell.

Westman Kuhmunen, A. 2016. Bassebájke. Heliga platser i landskapet. In D. Lindmark and O. Sundström (eds.): *De historiska relationerna mellan Svenska kyrkan och samerna* II, pp. 629–655. Skellefteå: Artos & Norma.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

5
The offering site in Mørsvikbotn, Sørfold municipality, Nordland county, Norway

Oddmund Andersen*

Abstract

An offering site and several scree graves are located in a scree landscape in Mørsvikbotn. A documentation project of the offering site has been conducted, and bones have been collected from the locality. Later, Tromsø University Museum excavated a scree grave in the same landscape, where several animal bones were identified, so the grave can also be interpreted as a sacrificial site. The results of the two studies are discussed. The bone material has been studied, with an emphasis on the species identified, and on which parts of the animals that were sacrificed. Radiocarbon dating of the material was also obtained. The cultural monuments are located in a Saami area, where it is possible to distinguish between three different Saami adaptations. A central question is which of the three groups used the offering site.

Keywords: Offering site, scree grave, Saami religion, North Norway, changing traditions

5.1 Introduction

An offering site is located in Muorgos, or Mørsvik, in Sørfold Municipality, Nordland County, and a scree grave has also been found here. Árran Lule Sámi Centre and the Sørfold division of Nordland Museum have documented the offering site (Andersen 2018). Later Tromsø University Museum excavated the scree grave in the same landscape. A number of animal bones were found in at the same place, which indicates that this could be a second offering site (Opvang and Kjellmann 2018). The site is therefore defined as a probable sacrificial site. The results of these two studies are discussed in the paper.

The sacrificial site has been known of for a long time. It is accessible by road, so it is easy to get to the area. Over time, many people have visited the place and collected bones from the offering site (pers. comm. Steinar Isaksen 2015; Vorren and Kalstad 1974). The first documentation of such enterprises dates back to the 1930s (Sandbakk 1982). Over time, this meant increased pressure on the area, and the number of bones has been reduced. These facts were among the reasons why we felt it was high time to make a thorough documentation of the site. Before the survey took place, a public meeting was held in Murgos/Mørsvik, where the plan was presented to the local people. We received a positive response and therefore felt that we had good reasons for conducting our investigations.

* Árran Lule Sámi Centre, oddmund.andersen@arran.no

There are several research questions for the project. A basic aim was to identify the species of the animals and kinds of bones included in the offerings at the site. Another aim was to date some of the bones, in order to get an idea about the age of the offerings. The final aim was to get insight into, who had placed the bones at the offering site?

The method of determining which kind of species dominated these two sites, is based on the number of bone fragments documented. No analysis of the minimum number of individuals, which could further improve the analysis, was done (Salmi et al. 2015: 13). Nevertheless, I believe that the analysis gives an indication of the species distribution at these two localities.

In addition, interviews were conducted with locals about the area, with an emphasis on understanding how they perceived the use of the sacrifice sites. Various archives have also been consulted both at Tromsø University Museum and the Norwegian Museum of Cultural history (Norsk folkemuseum) in Oslo.

My approach is based on sociologist Pierre Bourdieu's thinking about habitus. Habitus is about: the preoccupied active presence in the world, through which the world imposes its presence, with its urgencies, its things to be done and said, things made to be said, which directly govern words and deeds without ever unfolding as a spectacle (Bourdieu 1990: 52).

An action should be understood on the basis that an agent is permanently immersed in the social world, that is, one is in the world and understands the world from this. The strategic actions are influenced by structures, where the individual cannot go beyond the framework that already exists. These are transcendental structures that are historically constituted through practice, and constantly oriented towards practical functions. In this way, the individual has a practical knowledge of the world and aligns activities with this knowledge. The individual does things unconsciously without thinking that the actions follow a particular pattern. Practice, therefore, is, as part of habitus, knowledge learned through the encounter with the world, by copying, watching, listening, and attentive involvement (Bender 2006: 305).

5.2 Rituals and sacrifices

The Saami worldview was earlier probably understood as animistic. People perceived the world through a visible material and an invisible spiritual dimension. The first was everyday life, and the other dimension was populated by spirits and several divine beings. Through the presence of the beings, the different spirits had a strong impact on both life and the natural environment. According to Samuel Rheen, in the 1670s, the most powerful gods among the Lule Saami in Jokkmokk were the Thunder God, the Sun and 'Storjunkeren'. Storjunkeren had power over mammals, birds, and fish (Rheen (1671) 1983:35–43).

Meetings between the gods and people could happen at special places – the offering sites. These sites are often located in rocky terrain. Preferred places were a scree landscape with caves, overhangs, and big boulders (Manker 1957: 23–24). In this landscape, the *siejdde* or *værromuorra* could be located (Mebius 1968: 60). A *siejdde* (SaaL.) could be a sacred stone or a wooden figure. It belonged to the landscape and its inhabitants or users and had the power to influence daily life. Sacrifice to a *siejdde* was a way to stay in touch with the gods and the spirit world. Ethnographer Johan Albert Kalstad (1997) says that in the Lule Saami area, the *siejdde* could be both smaller and somewhat distinctive stone figures, or large stone blocks weighing up to several tons. In these places there could also be figures carved in wood.

It is possible to distinguish between several levels of ritual space (Rydving 1993: 98–100). The first level was composed of a few cult sites where the whole community and people from other communities came in order to perform rituals. An intermediate level could include cult sites used by families belonging to the same working group (SaaL.: *sijdda*), who followed the same migratory route or fished in the same lakes. Lastly, the third group included the places near the tent or hut, where the family performed their daily rituals.

People could sacrifice reindeer or other animals, money, tobacco, and even liquor to the *siejdde* (Kalstad 1997). The sacrifice could begin with the selection of a sacrificial animal. In the autumn, it was natural to sacrifice male reindeer to certain deities, while female reindeer were sacrificed to the goddess Sáráhkká. The animal that was sacrificed could be slaughtered in the place, and then certain parts of the animal were buried. This could be done through a sacrificial meal, where parts that were not eaten were laid down at the offering site (Mebius 2003: 142–143, 146). In other cases, it is known that complete animals could be sacrificed. It is, for example, known from the Salten area in Nordland that reindeer herders in the late 18th century could buy sheep, goats, cats, cocks, or other domesticated animals, and tie them to a cave, as a meal for their gods, who provided luck on the journey eastward. When they returned in the following spring, and did not find the sacrificed animal any longer, they regarded it as a sign of good fortune (Rosenwinge 1994 [1790]: 20–21).

Offering traditions have changed over time. The oldest dated sacrificial site is Unna Saiva in Gällivare, northern Sweden, where a bear bone was dated between 549 and 770 AD, while a bone of a swan was from the period before the 11th century (Salmi et al. 2015). During the Middle Ages, reindeer bones became more common. In the Lule Saami area, a bone deposit/offering site is documented in the high mountains in Hamarøy municipality, where reindeer bones have been dated to the end of the Viking Age and the early Middle Ages (Andersen 2008, 2009). In the Finnish area, the oldest reindeer bones from a sacrificial site have been dated to the 12th century. The offering of reindeer bones continued probably until the 17th century, with a peak in the period between1420 and 1660 AD. After that, the offering tradition continued as offerings of coins, small personal items, and, today, as performances for tourists (Äikäs and Salmi 2013: 69; Salmi et al. 2015: 10).

Manker (1957: 11) has argued that the offerings made by the Saami had utilitarian motives, and this view is also embraced by other researchers. It is argued that the offerings were related to subsistence and livelihood, and in this way the diversity of the species of animal offerings at Saami offering sites could reflect the connection between subsistence strategies and religious rituals (Johansen and Mulk 2006; Salmi et al 2015: 10).

5.3 The offering site in Muorgos/Mørsvik

The offering site in Muorgos/Mørsvik is mentioned for the first time in a source from 1923. The source says:

> *There was an offering site at Hellarnes in Mørsvikbotn. According to tradition, there was an idol – a human figure of wood that was first removed around 1830 (?) – at the same place. Initially, an attempt was made to burn the idol, but it was unsuccessful, and the human figure of wood was lowered into the fjord. There is a burial place near Hellarnes (Norges Topografiske beskrivelse* 1923, the author's translation).

The human figure of wood must be interpreted as a *siejdde*. Later written sources give the information that the siejdde was removed in the late 1800s. According to the descriptions, it was dragged down to the sea, where it lay for a time before it floated out into the water and sank. The description

says that the *siejdde* was completely black from being smeared with blood from animals for a long time (Sandbakk 1982). When we asked the locals about this event, some said that they knew who removed the pole. They also thought that this was done in the late 1800s.

The offering site is located in Hellernesura, overlooking the Mørsvikfjord (Figure 5.1). According to one of the informants, the place looks from a distance like a face with a nose. Hellernesura forms a scree landscape. The landscape is forested and slopes steeply towards the sea. It consists of blocks of stone, with several large stones and boulders. It is therefore very difficult to move in the landscape. The landscape borders the fjord in the west. In the east is Hellerneskollen, a small knoll just over 125 meters above sea level.

Figure 5.1: The offering site is located in the Mørsvikfjord. (Map: M. Spangen. Background map: The Norwegian mapping service.)

During interviews, informants told us that previously there were several graves in the scree. In the 1950s and '60s, people or youngsters from the village found several skulls in the scree that were removed and placed on the quay, where they lay for a while before they disappeared, probably into the sea (pers. comm. Steinar Isaksen 2015).

Through documenting the scree we recorded a scree grave, as well as two other sites where there have been scree graves. In one of these probable graves, we found birchbark with sewing marks. It is known that in the past corpses were covered with slivers of birchbark that were sewn together.

5.4 Archaeological investigation of the offering site

The offering site is located at the very top of the scree and above the scree graves. It is hard to get to the site, and we had to use a rope to pull us up to the last part of the offering site. The site was formed by a slab that juts out of the mountain, forming a space beneath the mountain and the slab. Due to the narrow sloping surface on the front it is possible to investigate the locality. The photo shows that there is not room for many people there (Figure 5.2). The bones were found inside this space (Figure 5.3), concentrated within an area of 3 m x 0.7 m, and lying on top of a layer of sand. Since it is completely under the mountain, this area is dry.

Over time, several different researchers and other people have visited the place. Bone material has been collected from this place over time, and today this material is located in different institutions. In 1930, missionary Bertrand Nilsen visited the site and collected bones from the place (Nilsen 1935). Later, in 1974 and 1975, people from Tromsø University Museum documented the area, and collected a number of bones at the same time. They also found some coins at the site, some pieces of wood, a nail, and a piece of iron (Vorren and Kalstad 1974, 1976).

Figure 5.2: Due to a narrow sloping surface on the front of the offering site (no. 1) it is possible to investigate the locality. (Photo: O. Andersen.)

Figure 5.3: The bones are found at the offering site (site no. 1). (Photo: O. Andersen.)

We received help from Tromsø University Museum and Erik Kjellman (Kjellman 2015) to carry out the documentation of the site, and we collected 51 bones from the place (Figure 5.2 and 5.3). In 1974, Vorren and Kalstad (1974) argued that the bone assemblage had been disturbed many times, since so many had visited the place. For that reason, we just selected the bones that lay on the surface. We submitted three samples for radiocarbon dating. The samples submitted were of cattle, sheep, and reindeer. They were all dated to the period from the mid-17th century to the 20th century (Figure 5.4). One can therefore assume that the site cannot be older than the 17th century.

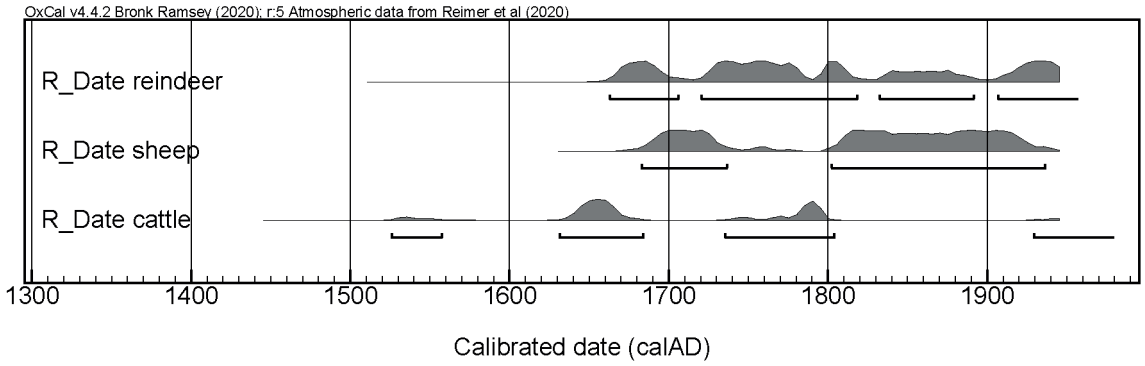


Figure 5.4: Radiocarbon dates of the bones.

How late the offering site was used is uncertain. The mission came to the fjord in 1722, with Thomas von Westen, who wanted to convert the Saami to Christianity. According to a note from Johannes Rasch, a minister from Rørstad who joined the journey to Muorgos/Mørsvik, the mission did not convert a single person, since the Saami had fled to the mountains (Breivik 1982: 16).

In a later source from 1725, we hear about a sacrifice at Ånderbakk farm, farther out in the fjord. A man had sacrificed a dog, and this became known to the authorities, so that the person who performed the sacrifice had to meet with the priest, where he was given a reprimand for his act. One can therefore assume that the missionaries' entry into the fjord could have made it difficult to continue the use of the offering site. Nevertheless, there are sources saying that some people continued to use the place up to the end of the 19th century (Rønnebu 1978: 64). Removal of the pole at the end of the 19th century confirms that the site had lost its significance by that time.

People from Tromsø University Museum found a coin dated 1922 at the site, and this is a special observation since mainly bones were sacrificed here. It is tempting to associate it with visitors to the place in the 1930s. Most likely the offering site was used in the period from the from the mid-1600s to the end of the 19th century.

5.5 What was sacrificed?

Researchers who visited the site before us believed that there were countless reindeer bones in addition to some horse bones (Simonsen 1991; Vorren and Kalstad 1974, 1976). Therefore, our initial hypothesis was that we might find reindeer bones and horse bones. In total, 51 bones from the site, weighing 1564.7 grams, were collected and analysed. The analysis was done by osteologist Anne Karin Hufthammer, University Museum of Bergen. The analysis documented the following species: cattle, sheep/goat, sheep, and reindeer. Fourteen of these bones were only defined as a cloven-footed animal.

Most of the bones that were analysed were from cattle (Figure 5.5), amounting to a total of 24 cattle bones. There were eight sheep/goat bones, while one bone was defined as sheep. There were four reindeer bones. In total, this shows that 33 bones were of cattle, sheep, and goat origin. The result was therefore surprising in relation to what we had expected. Only a small proportion of the bones were from reindeer, and horse bones were not identified.

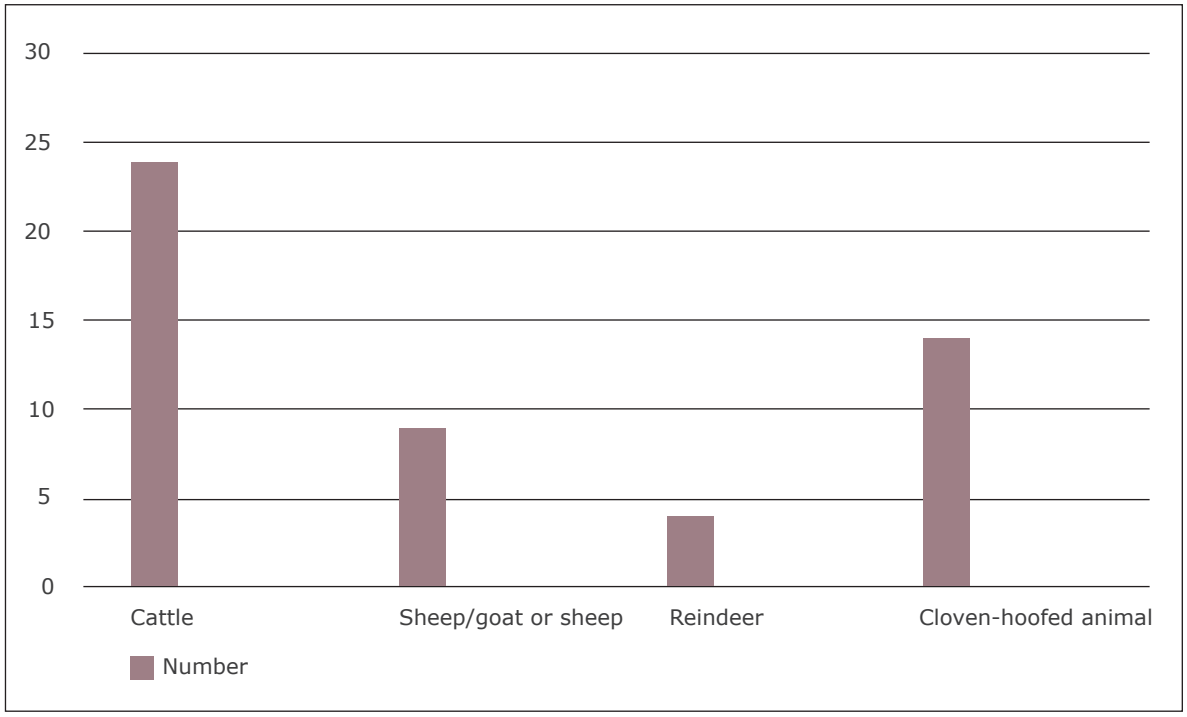


Figure 5.5: Bones that were species-identified from the offering site (site no. 1).

5.6 Which parts of the animals were sacrificed?

The analysis of the 51 bones identified shows that only certain parts of the animals were represented (Table 5.1). Five skulls, of which four were of cattle, and one skull of sheep. Several vertebrae were documented, most of which came from the middle or the front of the animals. Three ribs were identified. Finally, there were many bones from different parts of the feet. Six tibia bones were either split open or had cut marks, suggesting that the marrow had been removed.

Several animal bones were not documented, and these are primarily from the meaty parts, such as the upper front leg (*humerus*) and shoulder blades (*scapula*). In addition, there were no femur and pelvis bones, and some of the back parts of the vertebrae are also missing.

Table 5.1: The bone material from the offering site (site no. 1).

Latin Name	Part Of The Body	Number	Percent
Dens	Head	3	
Cranium	Head	5	
Mandibula	Head	4	
Total	**Head**	**12**	**24**
Atlas	Vertebra	1	
Vertebra	Vertebra	15	
Vertebra epiphysis	Vertebra	1	
Vertebra spina	Vertebra	1	
Total	**Vertebra**	**18**	**35**
Costa	Rib	3	
Total	**Rib**	**3**	**6**
Radius/Ulna	Feet	1	
Tibia	Feet	6	
Radiale	Feet	1	
Metacarpus	Feet	2	
Metatarsus	Feet	1	
Phalanx I, I, III	Feet	5	
Clacaneum	Feet	1	
	Feet	1	
Total		**18**	**35**
Total		**51**	**100**

5.7 The scree grave

The scree grave was excavated by Tromsø University Museum in 2017. The skeleton lay in a space between two big blocks, leaning against each other to form a cave. In total, 11 human bones were recorded. The bones were from a skull, a vertebra, and small pieces of a rib. The bones probably came from one individual, a man. The bones were placed on birchbark and moss. The birchbark may have been a part of shroud the deceased had been wrapped in, but only fragments with no traces of sewing marks were left. Radiocarbon dating of the skull and birchbark were dated to between 894 and 1260 cal. AD. The skull was dated between 895 and 1018 cal AD with 95.4% probability (Oppvang and Kjellmann 2018).

The excavation documented a large bone repository of various animal species on the same site. Of the 288 samples collected, the species of 151 bone fragments were identified; their total weight is 4187.3 grams (Figure 5.6). This material consisted of 119 reindeer bones; sheep or goats accounted for 25 bones, six bones were only identified as mammal and one bone was from a hoofed animal. About a third of the bone material had cut marks or was cut, probably to get access to the bone marrow. A reindeer bone was radiocarbon dated to between 1470 and 1640 cal. AD with 95.4% probability (Oppvang and Kjellmann 2018).

The dating of the reindeer bone does not coincide with the radiocarbon dating of the skull and indicates that the skeleton may be older than the bones at the site, but more datings should be conducted to investigate this further.

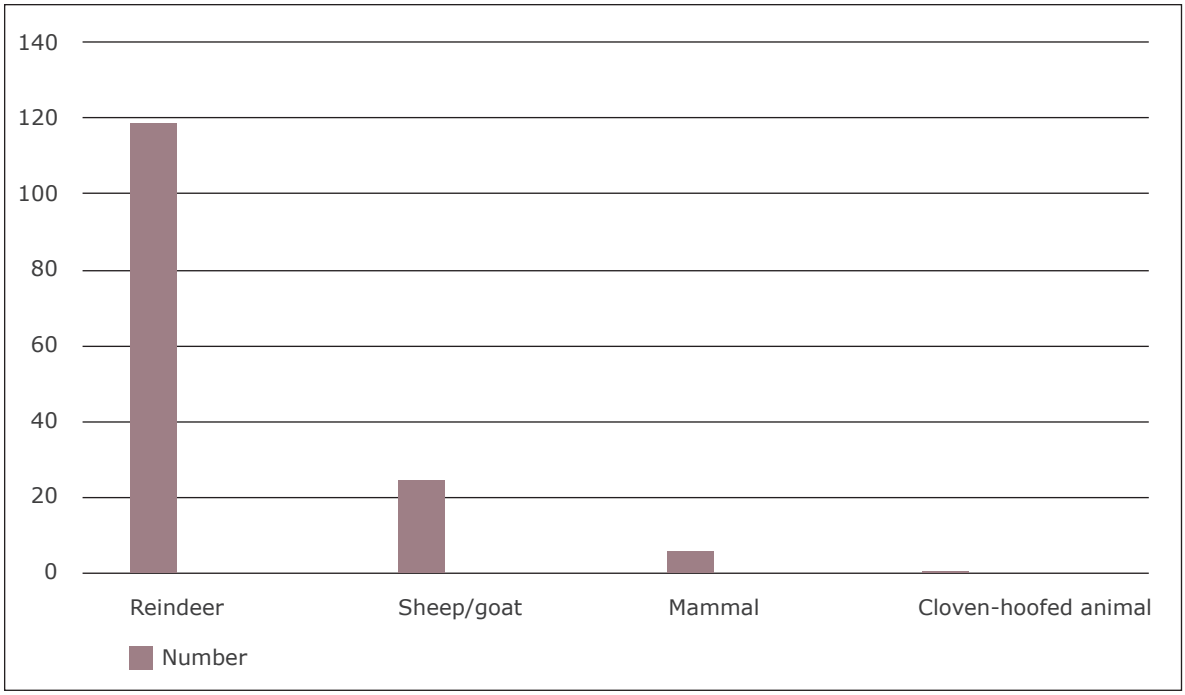


Figure 5.6: Bones species-identified in the scree grave (site no. 2).

In Table 5.2 there is an overview of what part of the animal the different bones are from. The largest proportion of the bones is related to what is defined here as part of the feet and constitutes 52.3 % of the bones, 11.3 % of the bones are from the skull, where four of the bones are from the cranium. Otherwise, the vertebrae make up 22.5 %, while bones from the ribs make up 10.6 %. Most parts of the animals are represented. This also applies to the meaty parts of the animals. Eight femur and seven humerus bones were identified. Shoulders (scapula) and pelvises were represented with four bones each. Bones from all parts of the vertebrae were recorded.

5.8 Discussion of the two sites

The analyses of the two sites show that the offering site (no. 1) is defined based on written sources and oral tradition, and the archaeological excavation has confirmed this as a place of sacrifice. The area had also been marked by a *siejdde* of wood, which stood on the site until the end of the 19th century. The scree grave (no. 2) is not documented as an offering site in written or oral sources. It is believed to be a sacrificial site on the basis of several bones identified in the scree grave, and that the area is generally known as a sacrificial site.

The two sites lie in a scree landscape which slopes down to the sea. Being located in a scree has been considered typical for this type of cultural monument (Manker 1957: 23–24). Both localities are close to the fjord and just below Hellerneskollen. The proximity to water and connection with dominant high points in the landscape has also been pointed out as landscape features associated with sacrificial sites in Finland (Äikäs 2015: 72–86). Tiina Äikäs (2015: 108) argues that connection with water is a landscape feature described as liminal, explained as being in a state of in-between two levels. This is understood as a meeting place between the natural and the supernatural. Similarly, Audhild Schanche (2000: 284) has pointed out, in her work on scree graves that this landscape may have formed passages

down to the realm of death, so that the scree landscape can be understood as a meeting place between the world of the living and the dead. Marte Spangen (2016: 104–106) has argued against placing too much emphasis on topographic landscape elements. She points out that Finland is stereotypically called 'the land of a thousand lakes', so the location of sacrifices close to water may have been natural. She argues that the location of the sacrificial site can be seen in relation to other conditions, such as good fishing and hunting sites or migration routes. Proximity to main residences in winter may have been another factor to emphasize.

Table 5.2: The bone material from the scree grave (site no. 2).

Latin name	Part of the body	Number	Total	Percent
Cranium	Head	4		
Dens	Head	10		
Mandibula	Head	3		
Total	**Head**		**17**	**11.3**
Atlas	Vertebra	2		
Axis	Vertebra	1		
Vertebra	Vertebra	31		
Total	**Vertebrae**		**34**	**22.5**
Costa	Rib	16		
Total	**Rib**		**16**	**10.6**
Astragalus	Feet	3		
Calcaneum	Feet	2		
Carpale 2+3	Feet	1		
Carpale 4+5	Feet	2		
Centrotarsale	Feet	1		
femur	Feet	8		
humerus	Feet	7		
Intermedium	Feet	1		
	Feet (Limb bones)	2		
Metacarpus	Feet	3		
Metacarpus (uncertain)	Feet	1		
Metapodium	Feet	1		
Metatarsus	Feet	7		
Pelvis	Feet	4		
Phlanx (uncertain)	Feet	14		
Radius+ulna	Feet	8		
Scapula	Feet	4		
Tibia	feet	9		
Ulna	Feet	1		
Total	**Extremities**		**79**	**52.3**
Unidentified		5		
Total	**Unidentified**		**5**	**3.3**
Total	**Total**	**151**	**100**	

The two sacrificial sites were used during two different periods of time. The most recent sacrificial site (no. 1) was probably used in the period from mid-17th century to the end of the 19th century. This is substantiated through radiocarbon dating, written sources, and oral traditions. The second site (no. 2) is dated only through one radiocarbon dating. It shows that it was used at least once during the period 1470 to 1640 cal. AD, and it therefore appears to be somewhat older than the first site (no. 1).

Before our investigation, different bone compositions were assumed for the two sites, with mostly reindeer bones and some horse bones being associated with the youngest site. Through the present analysis, it appears that the bones were mainly of cattle, sheep, and goat, and only a small percentage of reindeer bones were documented. In the other locality (site no. 2), reindeer bones predominate, and in addition there are sheep and goat bones. However, we note that there are no cattle bones, which implies that there has been a change. During the mid-17th century, cattle were introduced, and reindeer bones were no longer deposited in the same amount as before.

The analysis of the bones also shows some differences in what animal parts were deposited in the two places. At the sacrificial site (no. 1) certain bones were not included. This is primarily the case with bones from the meaty parts of the animal. At the second site (no. 2), the analysis shows that the meaty parts of the animals are also included.

5.9 Comparison with other offering sites

Archaeological investigations of other offering sites have shown that reindeer bones predominate in the material, which is typical (Salmi et al. 2015: 17). Bones of sheep or goat, bear, wild birds, beaver, elk, and cattle have also been documented. The age profile shows that individuals of all ages exist, but with a preference for older individuals. The sacrificial sites in Muorgos/Mørsvik included bones from reindeer, cattle, and sheep, and bones of no other species have been found here. When it comes to the species composition, it is the oldest sacrificial site (no. 2) that bears most resemblance to the other sacrificial sites, since reindeer bones predominate. At the more recent locality (no. 1) cattle dominate, and bone species are therefore atypical in relation to well-known offering sites.

An analysis of bone composition has been carried out on an assemblage from Unna Saiva (Salmi et al. 2015: 13). It appears that most reindeer bones were fragments of antlers attached to the skull and chopped off. A considerable number of skull and mandible fragments were documented, as well as the uppermost vertebra. The dominance of antlers, crania and mandibles is typical at Saami offering sites. Several uppermost vertebrae, such as atlas, axis, and uppermost cervical vertebrae have often been documented. Salmi and her co-authors (2015: 13) argues that this suggests that reindeer heads were offered with soft tissue still holding the skull and the uppermost vertebrae together at these sites. Bones from the limb extremities were also represented in the Unna Siva material. A large number of metatarsal and metacarpal bones are documented. There is an indication that meat and marrow were consumed from these bones before they were placed at the offering site. Upper limbs of bones and lower vertebra were often absent in the Unna Saiva bone material, but some fragments of the femur, humerus, pelvis, and scapula were identified.

The bone composition in the more recent sacrificial site (no. 1) bears resemblance to the bone material from Unna Saiva, where bones from the upper part of the animal, as well as lower limb bones predominated, while bones from flesh-filled parts were missing. At the other sacrificial site (no. 2) there are bones from most parts of the animal; bones from the meatier parts of the animal are also well represented.

Another notable feature is that there are no antlers at the two sacrificial sites. This has similarities to what is common in the scree graves, where antlers are rare (Schanche 2000: 292–294). No antlers

have been found in a scree grave, only a goat's horn found in Narvik, and this may be a powder horn. Since both localities in Muorgos/Mørsvik are dry, the lack of antlers was most likely not a result of decomposition. It must therefore be due to the fact that no antlers were placed at the two sites. Schanche (2000: 293–294) thinks that the lack of antlers in the graves must be due to the fact that antlers were treated differently than at the sacrificial sites, because antlers were not part of the death ritual. The reindeer bones were sacrificed to the god of death, while antlers were sacrificed to other gods. This suggests an interpretation as to why no antlers have been detected at these two sites in Muorgos/Mørsvik, since this is a burial ground.

5.10 Who sacrificed in Muorgos/Mørsvik?

Finally, I will address the question of who laid down the sacrificial material at the two sites. To gain an understanding of this, it is necessary to look at who lived in or used the area. The discussion emphasizes what written sources reveal about who was in the area.

Several different Saami groups were previously known in the area (Qvigstad and Wiklund 1909a: 146; Stensland 1979). In the 18th century, a Saami population can be linked to the settlements located along the fjord. Major Peter Schnitler's description from 1743, compiled in relation to the border negotations with Sweden, states that the people here had farms with horses, cattle, sheep, and goats. In addition, they fished in the fjords. Schnitler therefore said that they lived as Norwegians, but married their own ethnic group. In the 16th and 17th centuries, the Saami settlement is evenly distributed in the fjords, all the way to the head of the Mørsvik fjord. We can define them as coastal Saami farmers. During the 18th and 19th centuries, changes occurred along the coast, and many of the Saami farms were no longer identified as Saami settlements (Qvigstad 1929: 15).

In addition, two other Saami groups lived in the fjord during the same period who were described in the same written source (Qvigstad and Wiklund 1909a: 146). Firstly, there are Saami described in Norwegian as "*bygdesamer*". Schnitler wrote that they had settled in the outlying fields of the farms along the coast, in what we call outfields (No: *markebygder*), as there was no space along the shoreline. At least some of the people in this group had a nomadic lifestyle, moving between summer and winter camps, and reindeer husbandry was part of the economy. We can therefore categorize them as coastal Saami reindeer herders (Qvigstad and Wiklund 1909b: 345). But during the second half of the 19th century, there was a change in the economy, and agriculture became more important, and this led to the settlement becoming more permanent (Qvigstad 1929: 12).

A third group were the Saami who moved west to the coast in the summer and spent winters inland east of the mountain range Kjølen (the Keel) or high mountains in today's Sweden. Schnitler uses the term "Østlapper" ("eastern Lapps") for this group. Usually it is this group that have been identified as reindeer nomads (No: *helnomader*). Some of the people in this group would probably come to Muorgos/Mørsvik to participate in the market that existed there in the 1700s and 1800s.

5.11 Discussion

Through analyses of offering sites, we see that the tradition of sacrifice goes far back in time. It is a part of a religion, which is a system constructed by a long tradition of thoughts about fundamental human problems: life, love, good, evil, and death, to mention some (Insoll 2004: 7).

The offering tradition documented in Muorgos/Mørsvik shows many similarities with other places. The use of a scree landscape is a known feature in Saami culture (Manker 1957: 23–24). With reference to Bourdieu's thinking (1990: 53), we must assume that the Saami in Salten believed that this was the right way to treat the sacrificial material. The lack of antlers in the material was possibly due to the fact that this was a burial ground where sacrifices to the god of death may have been emphasized.

At some point, however, there has been a change, a shift from placing reindeer bones at the site to offering mainly livestock bones. What this is due to is uncertain. My hypothesis is that it could be linked with changes in the economy of the Saami population. If it is assumed that the offering site reflects subsistence strategies, it is natural to associate the use of this site with the coastal Saami population, a population that had livestock breeding as part of their subsistence strategies.

When cattle herding became more important, sacrificial practices were maintained by offering cattle. Through studies of settlement mounds in Tysfjord, it has been shown that both cattle and goats/sheep became part of the Saami economy during the Middle Ages (Andersen 2019). It is also known that the coastal Saami made sacrifices (Kolsrud 1947). The story from Ånderbakk from 1725 documents the sacrifice of a dog (Sandbakk 1982). In the 1700s, Ånderbakk was one of the Saami farms along the fjord, where the economy was based on farming and fishing.

It is feasible to imagine that the coastal Saami population with agriculture as their main subsistence used the sacrificial site. Therefore, there has been no shift in thinking or doxa related to the sacrificial tradition, even though new animals have been introduced and offered at the site. It has still been important to carry on the tradition by sacrificing. I therefore choose to assume that there may have been coastal Saami who made sacrifices at the offering site in Muorgos/Mørsvik.

It cannot be ruled out that sacrifices may have been made by reindeer herders, especially those visiting the fjords, because written sources also describe reindeer herders' sacrificial practices in Salten. But I think that the reindeer herders' contribution to the site was of lesser importance.

Finally, it ought to be pointed out that there was a marketplace in Muorgos/Mørsvik, in the 18th and 19th centuries (Rønnebu 1978: 68, Qvigstad and Wiklund 1909a: 145). Schnitler mentions that the 'eastern Saami' visited Muorgos/Mørsvik in the 18th century, to take part in the market (Qvigstad and Wiklund 1909a: 145–146, 154). The question is whether sacrifices were made at the sacrificial site in connection with meetings between the coastal and inland Saami populations. In this way, the sacrificial sites may have served as a ritual site for a wider part of the Saami population.

5.12 Conclusion

This study has documented the offering sites in Muorgos/Mørsvik. The analysis of the bone material has shown that there has been a change in the use of the area, where the oldest phase has documented bones of reindeer and sheep/goat, while from the 17th century onwards, cattle bones predominated together with bones of sheep/goat and only a few reindeer bones have been documented. Assuming that the offering practice reflects the subsistence pattern, it is natural to suppose that it was the coastal Saami population, who had an agricultural and fishing-based economy, that made sacrifices on the site. The lack of antlers in the bone material indicates that the sacrifice was linked to the area being a burial ground.

Acknowledgements

The article is based on a joint project funded by **the Sámi Parliament, the Sørfold division of Nordland Museum** *and* **Árran Lule Sámi Centre.** *Thanks to* **Else Johansen Kleppe** *and the referees who have commented on this article.*

Bibliography

Äikäs, T. and A-K. Salmi, 2013. The siedi is a better altar/the noide drum's a purer church bell: long-term changes and syncretism at Sámi offering sites. *World Archaeology* 45(1): 64–82.

Äikäs, T. 2015. *From Boulders to Fells. Sacred Places in the Sámi Ritual Landscape*. Translated by S. Silvonen. Monographs of the Archaeological Society of Finland 5. Helsinki: Archaeological Society of Finland. Available at: http://www.sarks.fi/masf_5/masf_5.html.

Andersen, O. 2008. Reindriftens oppkomst i nordre Nordland. In B. Evjen and L. I Hansen (eds.): *Nordlands kulturelle mangfold. Etniske relasjoner i historisk perspektiv*, pp. 113–147. Oslo: Pax.

Andersen, O. 2009. Bone deposit and reindeer luck. In P. Halinen, M. Lavento, and M. Suhonen (eds.): *Recent Perspectives on Sámi Archaeology in Fennoscandia and North-West Russia: Proceedings of the First International Conference on Sámi Archaeology, Rovaniemi, 19−22 October 2006*, pp.7–24 ISKOS 17. Helsinki: Finnish Antiquarian Society.

Andersen, O. 2018. *Feltrapport. Dokumentasjon av offerplassen i Mørsvikbotn, Sørfold kommune*. Unpublished report. Drag: Árran lulesamisk senter.

Andersen, O. 2019. The settlement mounds in Divtasvuona/Tysfjord, North Norway. Traces of a Sami fisher-farmer economy. *Acta Borealia* 36(1): 93–116.

Bender, B. 2006. Places and landscape. In C. Tilley, W. Keane, S. Küchler, M. Rowlands, and P. Spyer (eds.): *Handbook of Material Culture*, pp. 303–314. London: Sage.

Bourdieu, P. 1990. *The Logic of Practice*. Cambridge: Polity Press.

Breivik, K. 1982. Offerplassen i Mørsvikbotn. *Årbok for Sørfold* 1: 8–16. Sørfold lokalhistorielag.

Insoll, T. 2004. *Archaeology, Ritual, Religion*. New York: Routledge.

Johansen, E. K. and I. M. Mulk. 2006. Religion embedded in the landscape - Sámi studies and the recognition of otherness. In G. Mandt and R. Barndon (eds.): *Samfunn, symboler og identitet*, pp. 363–376. UBAS 3. Bergen: University of Bergen.

Kalstad, J. A. 1997. Slutten på trommetida - og tida deretter. *Ottar* 97(4): 16–27.

Kjellman. E. 2015. *Mørsvik – Sørfold. Oppmåling av offerplass (Id 212642) for Árran lulesámisk sentert*. Unpublished report. Tromsø: Arctic University Museum of Norway.

Kolsrud, K. 1947. *Finnefolket i Ofoten. En studie i Ofotens demografi og sjøfinnenes etnografi i eldre tid*. Nordnorske samlinger 8. Oslo: Brøgger.

Manker, E. 1957. *Lapparnas helliga ställen. Kultplasser och offerkult i belysning av Nordiska museets och Landsantikvarernas fältundersökningar*. Acta Lapponica 13. Stockholm: Gebers.

Mebius, H. 1968. *Värro. studier i samernas förkristna offeriter*. Skrifter utgivna av Religionshistoriska Institutionen i Uppsala 5. Uppsala: Almqvist & Wiksell.

Mebius, H. 2003. *Bissie. Studier i sámisk religionshistoria*. Östersund: Jengel.

Nilsen, B. 1935. *Letter to Ole Soberg at Etnografisk museum in Oslo.* Unpublished document. Oslo: Arkiv Norsk folkemuseum.

Norges Topografiske beskrivelse, hefte 5: 1923. *Topografisk beskrivelse til gradteigskart*. L11 Nordfold. Kristiania: Norges geografiske opmåling.

Oppvang, J. and E. Kjellman. 2018. *Sikring av urgrav id. 214703 Mørsvikbotn, Sørfold k, Nordland f. Tromsø Museum*. Excavation report. Tromsø: Arctic University Museum of Norway.

Qvigstad, J. and K. B. Wiklund. 1909a. *Dokumenter angaaende flytlapperne. Samlede efter renbeitekommissionens opdrag af J. Qvigstad och K. B. Wiklund.* 1. Renbeteskommissionen af 1907. Kristiania: Grøndahl & Søns bogtrykkeri.

Qvigstad, J. and K. B. Wiklund. 1909b. *Dokumenter angaaende flytlapperne. Samlede efter renbeitekommissionens opdrag af J. Qvigstad och K. B. Wiklund.* 2. Renbeteskommissionen af 1907. Kristiania: Grøndahl & Søns bogtrykkeri.

Qvigstad, J. 1929. *Sjøfinnen i Nordland*. Tromsø Museums Årshefter 51:1. Tromsø: Tromsø Stiftstidende.

Rheen, S. 1983 [1897]. *En kortt Relation om Lapparnes Lefwarne och Sedher, wijdskiepellsser, sampt i många stycken grofwe wildfarellser.* Bidrag till kännedom om de svenska landsmålen ock svenskt folkliv. Bd. 17:1. Uppsala: Harald Wretman.

Rosenwinge, E. H. 1994 [1790]. Noget om Nordlandene især om Saltens fogderi, skrevet 1790. In J. D. Monssen (ed.): *Noget om Nordlandene, især Salten og Saltdalen*. Rognan: J.D. Monssen.

Rydving, H. 1993. *The End of Drum-Time. Religious Change among the Lule Saami, 1670s−1740s*. Acta Universitatis Upsaliensis 12. Uppsala: Uppsala University.

Rønnebu, F. 1978. Samer i Sørfold. *Årbok for Sørfold* 1978: 63–71.

Salmi, A. K, T. Äikäs, M. Fjellström, and M. Spangen. 2015. Animal offerings at the Sámi offering site of Unna Saiva. Changing religious practices and human-animal relationships. *Journal of Anthropological Archaeology* 40: 10–22.

Sandbakk, O. 1982. Mørsvikbotn på 1800-tallet. *Årbok for Steigen* 7.

Schanche, A. 2000. *Graver i ur og berg. Sámisk gravskikk og religion fra forhistorisk til nyere tid*. Karasjok: Davvi Girji.

Simonsen, P. 1991. *Fortidsminner nord for polarsirkelen*. Oslo: Universitetsforlaget.

Spangen, M. 2016. *Circling Concepts. A Critical Archaeological Analysis of the Notion of Stone Circles as Sámi Offering Sites*. Stockholm studies in archaeology 70. Stockholm: Stockholm University.

Stensland, R. H. 1979. *Bosettinga i Steigen 1300−1660.* Unpublished MA-thesis. Tromsø: University of Tromsø.

Vorren, Ø. and J. A. Kalstad. 1974. *Dagbok for feltarbeid sommeren 1974*. Unpublished archive document. Tromsø: Arctic University Museum of Norway.

Vorren, Ø. and J. A. Kalstad. 1976. *Dette er fortsettelsen av undersøkelsene i Hamarøy mellom Strindvatnet og Sandnesvatnet*. Unpublished archive document. Tromsø: Arctic University Museum of Norway.

Personal communications

Steinar Isaksen 2015. Interview performed by Oddmund Andersen and Arne Håkon Thomassen. Steinar Isaksen was born in 1941 and is from Sørfold municipality.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

6
The function of the Stállo foundations in the Scandinavian mountain ridge reconsidered

Kjell-Åke Aronsson*

Abstract

The interpretation of the Stállo foundations in the Scandinavian mountain ridge has been debated since the beginning of the last century. Today most researchers are of the opinion that these settlements are prehistoric Saami settlements. According to new studies they were built and primarily used in the time interval between AD 640 and AD 1180. The recent debate has been whether they represent a society of reindeer hunters or groups of reindeer herders. The seasonality has also been discussed. Where they just occupied during the snow-free season or even in winter? By applying palaeoecological studies, new information of the land use in the period of the Stállo settlements is put forward. These studies indicate minimal human impact on the vegetation. The historical milking grounds on the same sites are a later phenomenon. Stállo foundations can be interpreted as short time occupation related to the trade between Saami and northern Norwegian chieftains.

Keywords: Saami, Stállo, trade, Norse chieftains

6.1 Introduction

For over 100 years the so-called 'Stállo' sites in the Scandinavian mountain ridge have been debated vividly. They are large, oval, or almost rectangular foundations with a hearth in the middle. Around is a marked earthwork and the floor is a bit below the surrounding surface of the ground. As a rule they are often larger than remains of more recent Saami turf huts with usual size of 5–6 m in diameter. The most common is that they occur two to three together, and in some areas there may be several groups close to each other. In older research they were set in connection with the Vikings trade voyages. The fairy-tale character 'Stállo' was perceived as a mythical memory of these Vikings. These settlements were therefore named 'Stállo foundations' (Drake 1918: 315–319). However, already Torkel Tomasson and Ernst Manker pointed out that these sites, after all, had a great resemblance to the remains of Saami huts (Manker 1960; Tomasson 1988 [1917]). Some researchers have persistently maintained the interpretation of these sites as remnants of Nordic peat huts. Olof Holm has however expertly and convincingly responded to their arguments (Holm 2016).

* Ájtte, Mountain and Sami Museum, kjell-ake.aronsson@ajtte.com

The aim with this study is to discuss the land use in connection with the Stállo settlements. In earlier research the discussion has been whether the Stállo sites are related to reindeer hunting or reindeer herding. The osteological material from the sites is very poor and gives no strong support for that slaughtering of reindeer, either wild or domestic, was of importance.

Inga-Maria Mulk´s archaeological excavations of Stállo sites in the Jokkmokk Mountains in the 1980´s became crucial to the interpretation (Mulk 1994). Mulk was able to show in detail how the space in the foundations was planned. The remains showed clear similarities with the spatial division of Saami huts. Finds of warlike Vikings did not exist. However, the construction details of the buildings were not entirely clarified through these investigations. Later, Lars Liedgren and Ingela Bergman have proposed how the buildings can be constructed from birch logs and birch bark. Today these sites are usually on the bare mountain, but we know that the tree line was higher up when they were in use. There was no shortage of building materials. There were enough wood and birch bark to build a stable construction. Their proposal therefore has some credibility (Liedgren and Bergman 2009).

6.2 Reindeer hunters or herders?

Mulk put the Stállo sites in connection with Saami wild reindeer hunting in the mountains. It would have been the entire Saami village community that went up to the mountains for hunting wild reindeer (Mulk 1984: 262). Their winter village would have been down in the forests. When the Saami later became nomadic reindeer herders, the settlement pattern was changed. The hearth of the nomad tents now becomes the settlement type that replaces the Stállo sites in the mountains. Mulk´s interpretation had to endure a great deal of criticism. Inger Storli put the Stállo sites in connection with early reindeer herding and pointed to similarities with younger Saami summer campsites. The Stállo sites usually occur in groups and this was the result of repeated settlement (Storli 1993). On the other hand, Mulk has been supported by Ingrid Sommerseth who also interpreted the sites as reindeer hunters' settlements. Sommerseth admits, however, that it is a troublesome circumstance that there are no finds of hunting equipment and so little bone waste. It would rather speak in favour of those who interpreted the sites as remains of reindeer herders' summer camps (Sommerseth 2009: 256–257). Often there are remains of younger settlements with hearths and historical milking grounds at the same sites. Liedgren and Bergman (2009) have pointed to the fact that the Stállo sites where situated in a forest with birch. According to my opinion these sites where probably not suitable as summer camps for reindeer herders, because during summer, mountain reindeer prefer the bare mountains with less insects.

6.3 Saami winter villages?

That the Saami original social organisation should have been village communities like the historically known villages among the Skolt Saami has been an axiom in Saami research, a matter of obviousness that does not even need to be discussed. During the winter the village community stayed together in a common winter village. During the summer the population could be more dispersed. Almost all, archaeologists, historians, and anthropologists have believed in this theory put forward by Väinö Tanner (Tanner 1929). Over the years, some critical voices have been found such as ethnographer Kerstin Eidlitz Kuoljok. According to Eidlitz Kuoljok, there are no known ethnographic examples that northern peoples stayed together in common winter villages. Because of scarce resources the popula-

tion spread out during the winter. Eidlitz Kuoljok put forward the idea, that the winter villages among the Skolt Saami were the result of the introduction of the Russian village organization among them in late historical time. It is not a question of an original Saami village organisation (Eidlitz Kuoljok 2011). Thomas Wallerström has recently discussed how the idea of Saami winter villages could have been so influential, despite the fact that remains of such winter villages never have been found in the Western Saami area (Wallerström 2017 and this volume). Archaeologist Nina Karlsson investigated sites with rows of hearths presumed to represent winter villages. If a larger group of people have lived together in a common winter village it should give clear chemical imprint through all the wastes. In Karlsson´s soil chemical investigations there were no signs that clearly could be related to common winter villages. If so, the soil chemical signals would have been stronger (N. Karlsson 2006: 164).

In contrast to earlier researchers like Storli (1993), Mulk (1994), and Sommerseth (2009), Ingela Bergman, Lars Liedgren, Lars Östlund, and Olle Zackrisson propose that the Stállo sites also were occupied during the winter. It was a kind of common winter village (Bergman et al. 2008). The fact that they were situated in forest when they were in use would have made it quite possible to live there even in the winter. Liedgren and Östlund also performed experiments to investigate how much firewood could be spent during the winter (Liedgren and Östlund 2011). In the area investigated archaeologically, Adamvallda, 31 Stállo foundations are situated. 100–150 people may have stayed there at the same time. One conclusion was that the settlements of a large group of people depleted wood resources. The birch trees became sparse to eventually disappear completely (Östlund et al. 2015). When the climate became colder there were no possibilities for the forest to regenerate. Therefore Stállo sites today are found on bare mountain heaths. According to Bergman and her colleagues, the people of the Stállo sites practised an early form of reindeer herding (Bergman et al. 2008). An important question is how a rather large group of people have been able to support themselves during the winter without a large slaughter of domesticated or wild reindeer? The traces of this are missing.

6.4 Palaeoecological investigations in Suollagavallda

When Mulk started to investigate Stállo foundations in the Jokkmokk mountains the largest known concentration of Stállo foundations was in an area called Suollagavallda (Mulk 1994: 68–79). The area is today bare mountain (Figure 6.1). A total of ten localities with 30 foundations are situated in this area (Figure 6.2). There are also a number of pits that have been interpreted as pits for food preparation and storage. There are also some hearths and a few pit traps in the area. There are many radiocarbon dates from the sites. The Stállo foundations are radiocarbon dated between 700 cal. AD and 1220 cal. AD, but with a concentration in the time interval 1005–1220 cal. AD. Among the archaeological finds are soapstone vessels, spindle whorls, and metal objects. However, hunting equipment and waste from slaughtering is lacking.

In 2011, Ájtte museum started new investigations in Suollagavallda. The purpose of this was not to perform new archaeological excavations. Many of the remains in the area have already been excavated and radiocarbon dated by Mulk. The new issue concerned the use of the land. Was it a question of wild reindeer hunting or herding? Did hunters or herders live here during summer and autumn, or even during winter, as previously proposed (Bergman et al. 2008)? We started by conducting an intensive inventory to investigate if there could be deposits of reindeer bone waste that were not previously detected. The result was negative and we found no bone deposits. However, we found that there was a number of historical reindeer milking grounds in the area and previously unregistered hearths. Some of the Stállo foundations were also situated on historical milking grounds (Figure 6.3). Although reindeer milking has not been practiced in the area for more than 100 years, the historical milking grounds

Figure 6.1: Overview map. 1. Suollagavallda, close to the Swedish-Norwegian border, 2. Stállonjárga, 3. Adamvallda. (Map: M. Spangen. Background map: The Norwegian Mapping Service.)

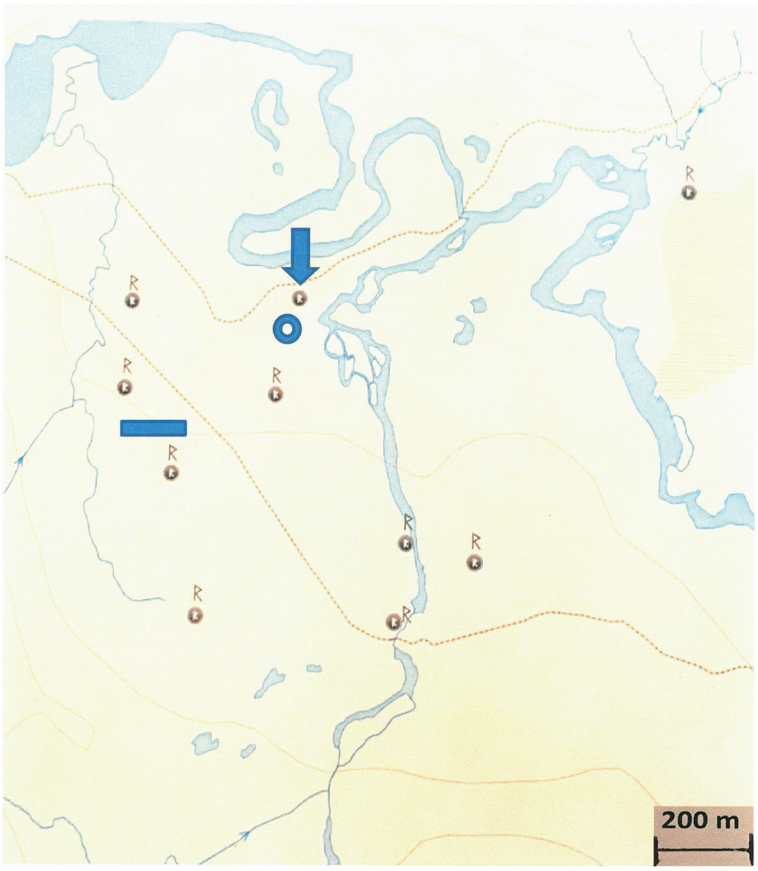


Figure 6.2: In Suollagavallda are ten localities with 30 Stállo foundations. The point marks the site on the map in Figure 6.5 and the wetland for sampling for pollen analysis. (Map: K-Å Aronsson.)

Figure 6.3: Stállo foundations at a historical milking ground. (Photo: K-Å Aronsson.)

are still visible through a vegetation of grasses and herbs. As previous studies have demonstrated, the vegetation at these historical milking grounds remains strikingly stable (Egelkraut et al. 2018). Central in the investigation area was a little wetland (Figure 6.2) that would make it possible to take samples for pollen analysis. The area looked promising to try to answer questions about historical land use.

The result of the pollen analysis was staggering (Figure 6.4). We could not see any obvious human impact at all. The *Oxyria/Rumex* curve is nearly continuous because *Rumex* is growing naturally on the

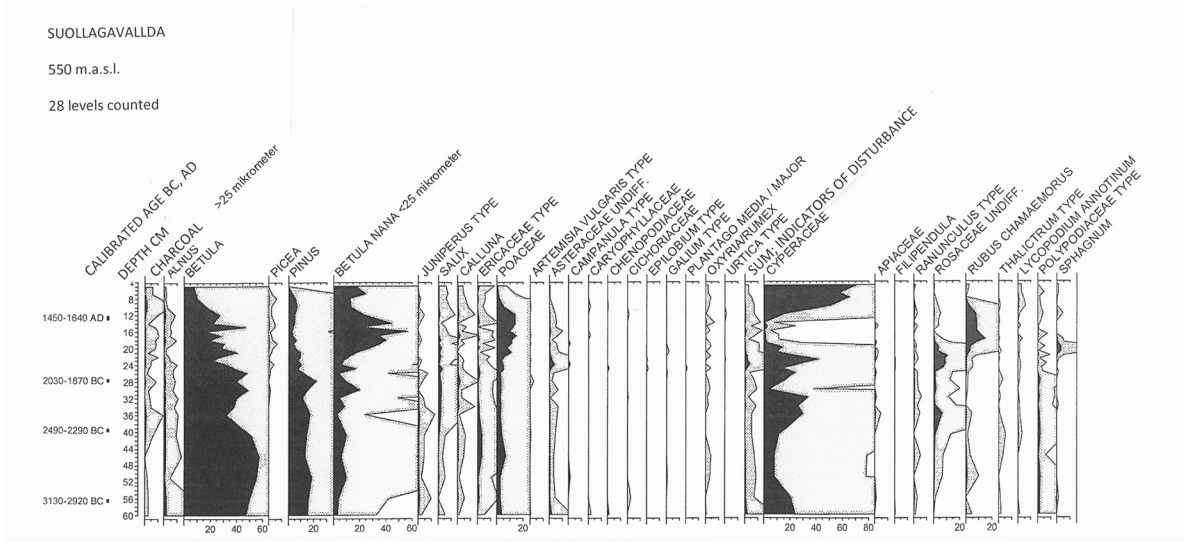


Figure 6.4: Pollen diagram from Suollagavallda.

mountain slopes. Single pollen grains from *Plantago* and a few other cultural indicating pollen spread over thousands of years do not indicate human impact. Probably they are long-distance transported like pollen from *Picea*. Spruce has never been growing in the area. The pollen diagram demonstrates a development from forest with birch and pine to an open tundra landscape. There is no visible human impact from the time of the Stállo foundations. The forest with birch remained until around 1600 cal. AD when a marked decline starts (Wallin 2012). This is during the coldest part of the period usually called the Little Ice Age (Grudd 2008). We obtained the same result from a site with Stállo foundations on a little peninsula in Lake Virihaure in Badjelannda National Park (Wallin 2011). In the pollen stratigraphy from Suollagavallda we also saw that the willow belts were reduced when the forest declined. In a natural succession it should have been the opposite when trees withdraw. This indicates human influence and reindeer grazing in the area. Increase of carbon particles is also an indication of nearby human settlements of reindeer herders' summer campsites. However, this was later in time than the period of the Stállo foundations. Other taxa, such as *Calluna*, have some peaks. This is not surprising when the landscape became bare mountain. When the forest declined *Cyperaceae* was favoured on the mire because it gathered more water from precipitation. The decline of *Rubus chamaemorus* also indicates a change of the conditions of the mire. This was favourable for reindeer grazing there.

Grasses also increased when the landscape became more open. In Saami language, "*vallda*" means open grassland and the pollen analysis also indicates this with a peak of *Poaceae.* In the following years, we conducted extensive land explorations with help of measure of magnetic susceptibility (MS) and phosphate. The map (Figure 6.5) shows the results from one of the sites. In connection with the sampling in the soil, we managed to pinpoint some unregistered hearths that were not visible above

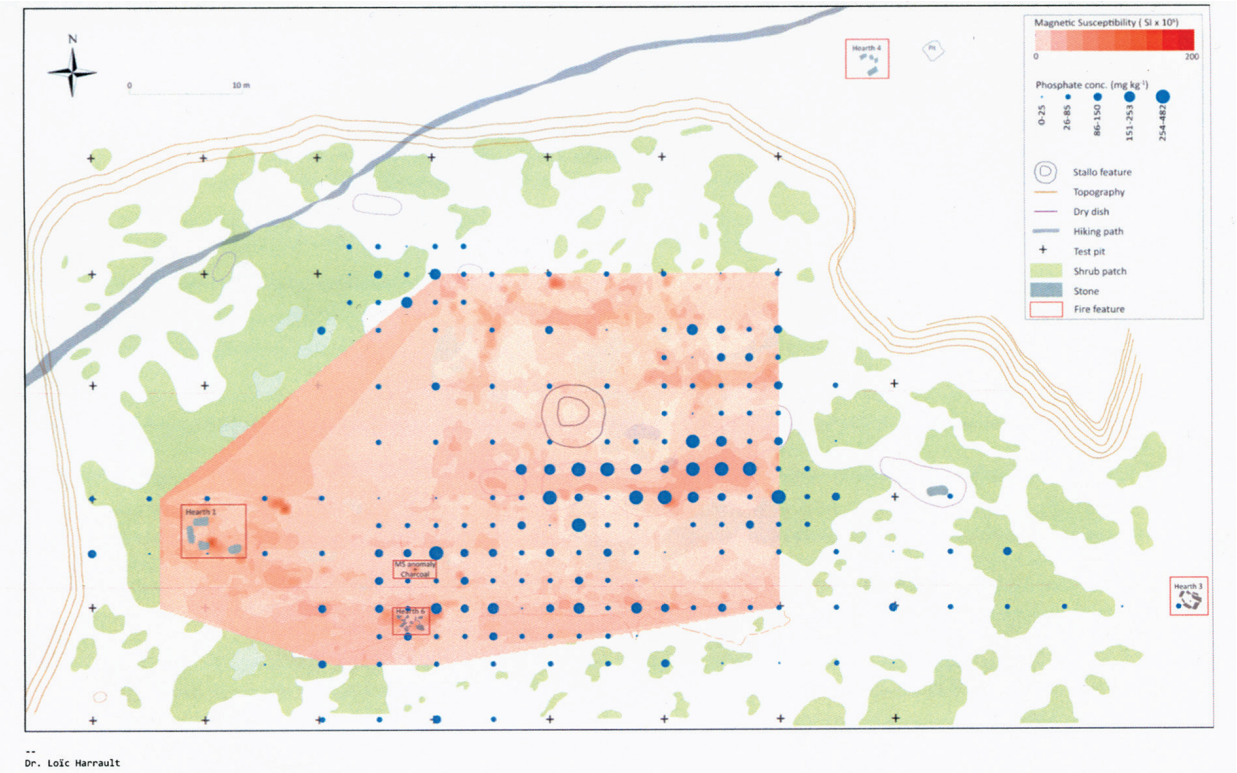


Figure 6.5: Results from sampling for MS and phosphate analysis from a site with a Stállo foundation on a historical milking ground. Increased MS values are found close to hearths as well as increased phosphate values over the site. The Stállo foundation has been excavated and the soil is so far disturbed and gives no signals in MS.

ground. Since we got some pieces of charcoal, we let these go to radiocarbon dating. We got two dates from hearths to around 500 cal. AD. This is in agreement with what we know of a radical change in settlement patterns in northern Sweden after AD 400 (Aronsson 2009; Bergman 1995: 20; Hedman 2003; N. Karlsson 2006: 148). Bergman´s (1995: 201–203, 208) interpretation was that the almost complete lack of settlement traces by the shores of the great lakes after the end of the Roman Iron Age indicated a change of subsistence strategy where reindeer became more important. The new settlement pattern is characterised by rows of hearths that are not located at the shores of great lakes. These hearths are oval or rectangular and are the typical remains from the nomadic tents. They are radiocarbon dated from around AD 500 up to AD 1900 (N. Karlsson 2006: 164).

There are also some pit traps in Suollagavallda. There is just one uncertain radiocarbon dating from one pit trap, so it is not possible to make conclusions if the pit traps were contemporary with the Stállo foundations or not. However, it would be very peculiar if Stállo foundations and nearby pit traps were in use at the same time. It is very unlikely that wild reindeer would wander right into a human settlement area with many people. The lack of slaughtering waste in connection with the Stállo foundations also indicates that hunting of wild reindeer cannot have been very important. Although Sommerseth (2009: 256–257) was of the opinion that the Stállo sites were related to hunting of wild reindeer the lack of reindeer bones is a problem for this interpretation.

6.5 Prehistoric meeting and market places?

A crucial issue remains: how can these sites with Stállo foundations in the western part of the Scandinavian mountain ridge be interpreted? At the sites there are no indications of slaughtering of reindeer in a large scale. Hunting equipment is missing among the archaeological finds from the foundations. The impact on forest and ground vegetation is minimal. This is the same result that Hanna Karlsson (Karlsson et al. 2008: 20) reached through a pollen analysis from a site with Stállo foundations in the Vindel River valley. Karlsson found the first cultural indications linked to domestic animals from a site called Gieddeålge from the time around 1350 cal. AD. *Poaceae, Rumex, Epilobium, Urtica*, and *Plantago* indicated human induced disturbance. This is later than the period of Stállo foundations, however. *Giedde* also means historical milking ground in Saami language. Based on results from an archaeological excavation and pollen analysis, Oddmund Andersen (2017) came to the conclusion that a Saami settlement with milking pastoralism was established about AD 1300–1400. This site is situated on the Norwegian side of the border and not so far away from Suollagavallda.

It is striking that notable amounts of slaughtering waste never have been found in relation to the Stállo foundations. The conclusion is that these foundations only were used during a short period of the year. It was probably during the snow free season, because the impact on forest vegetation is minimal. There was no need for much fuel for the hearths. A possible connection between the Stállo sites in the mountains and the rows with hearths in the forest zone has been discussed in earlier research (Storli 1993). Many sites with hearths in the forest zone are contemporary with the Stállo sites (N. Karlsson 2006: 148).

Liedgren et al. (2006) and Bergman et al. (2008) has shown that the Stállo sites were in use just for a few centuries between AD 640 and AD 1180. That is a more narrow time span than Mulk discussed (Mulk 1994: 142–144). In some cases there are later secondary use but in another economic and social context with reindeer herders. The Stállo sites seem to disappear abruptly in time. Chronologically, the Stállo foundations time is coinciding with the glory days of the north Norwegian chieftains during the Viking period. The exchange of trade between Saami and northern Norwegian chieftains is described in written sources and has been discussed in earlier research (Berglund 1995; Hansen

1990; Hansen and Olsen 2004: 65–69). This trade continued in the early medieval period. The Saami delivered fur. The furs were prepared on the hunting grounds in the forests. The delivered fur leaves no archaeological traces. In return, the Saami got metals, soap stone vessels, and probably also wool, because spindle whorls are among the archaeological finds.

Probably the Saami were organised in kinship related groups of varying size in space and time. These groups met the Norwegian chiefs at fixed meeting points. I think the Stállo sites can be explained in this context as a type of meeting and trade site. They may also be links in a redistributive network inside the Saami society. Mulk may be correct that in some places a whole Saami community went up to the mountains together. However, the reason was not for hunting wild reindeer but for trade. Mulk is also correct in the critique of Storli´s interpretation that the Stállo sites represent reindeer pastoralism settlement pattern (Mulk 1993: 31). Pastoralist's settlements maintain a much wider distance between the tents or huts for good functional reasons connected to reindeer herd management.

All known Stállo sites are located in the western part of the Scandinavian mountain ridge. From Suollagavallda, the distance is less than a day´s march to the Atlantic. Logistically, the location is suitable for contacts over the mountain ridge. Among the finds from the Saami metal deposits from AD 1000–1350 are many Norwegian coins (Serning 1956, Zachrisson 1984). The influx of Norwegian coins, however, ends completely around AD 1200 (Serning 1956: 218).

At the same time around AD 1200 the Stállo sites are finally abandoned. At that time, the Norwegian royal power had reduced the role and privileges of the north Norwegian chieftains. Zachrisson has pointed out that cod fishing now became a significant nutrient. Dried cod became an important commodity as Lenten fare to the Catholic Europe. The economy got a new focus in sea fishing (Zachrisson 1984: 124). The Stállo sites lost their function and were abandoned. Interest in fur trade slowed down in Norway. However, the fur trade took other roads to the east. There is no decline or discontinuity in the settlements with hearths from AD 1200 (N. Karlsson 2006: 148). A new trading system between Saami and external tradesmen, the so-called 'birkarlar', replaced the system of the Stállo period (Bergman and Edlund 2016). New meeting places and trade routes were established.

Acknowledgements

The investigations in Suollagavallda during the years 2011–2017 have been supported with funding from **the Interreg IVA Nord program, the Ájtte Museum** *and* **JPI Climate Call funding.**

Bibliography

Andersen, O. 2017. Landskap og kulturminnen i Gierggebuodo i Divtasvuona suokhan/Tysfjord kommune. Analyse av ulike typer kilder for å dokumuntere bruken av området. In A. F, Nielssen, K-Å. Aronsson, O. Andersen, and S. Gælok (eds.): *Gielas/Kjölen. Arkeologi og historie i lule- og sörsamisk område*, pp. 41–63. Árran julevsáme guovdásj 2. Drag: Báhko.

Aronsson, K-Å. 2009. Relations between man and reindeer – traces of reindeer herding. In P. Halinen, M. Lavento, and M. Suhonen (eds.): *Recent Perspective on Sámi Archaeology in Fennoscandia and North-West Russia: Proceedings of the First International Conference on Sámi Archaeology, Rovaniemi, 19–22 October 2006*, pp. 17–24. ISKOS 17. Helsinki: Finnish Antiquarian Society.

Bergman, I. 1995. *Från Döudden till Varghalsen. En studie av kontinuitet och förändring inom ett fångstsamhälle i övre norrlands inland, 5200 f.Kr – 400 e.Kr*. Studia archaeologica Universitatis Umensis 7.Umeå: University of Umeå.

Bergman, I, L. Liedgren, L. Östlund, and O. Zackrisson. 2008. Kinship and settlements: Sami residence patterns in the Fennoscandian Alpine area around A.D. 1000. *Arctic Anthropology* 45(1): 97–110.

Bergman, I. and L-E. Edlund. 2016. Birkarlar and Sámi – inter-cultural contacts beyond state control: Reconsidering the standing of external tradesmen (birkarlar) in medieval Sámi societies. *Acta Borealia* 33(1) : 52–80.

Drake, S. 1918. *Västerbottens-lapparna under förra hälften av 1800-talet. Etnografiska studier.* Lapparna och deras land VII. Umeå: Två Förläggare Bokförlag.

Egelkraut, D, K-Å. Aronsson, A. Allard, M. Åkerholm, S. Stark, and J. Olofsson. 2018. Multiple feedbacks contribute to a centennial legacy of reindeer on tundra vegetation. *Ecosystems* 21(8): 1–19.

Grudd, H. 2008. Torneträsk tree-ring width and density AD 500−2004: A test of climatic sensitivity and a new 1500-year reconstruction of north Fennoscandian summers. *Climate Dynamics* 31(7): 843–857.

Hansen, L. I. 1990. *Samisk fangstsamfunn og norsk hövdingeökonomi.* Oslo: Novus.

Hansen, L. I. and B. Olsen. 2004. *Samenes historie fram til 1750.* Oslo: Cappelen Akademisk Forlag.

Hedman, S. D. 2003. *Boplatser och offerplatser. Ekonomisk strategi och boplatsmönster bland skogssamer 700−1600 AD.* Studia archaeologica Universitatis Umensis 17. Umeå: Umeå University.

Holm, O. 2016. Stalotomterna, samerna och Hålogalands stormän. Svar på Anders Wepsäläinens replik. *Fornvännen* 111(3): 201–204.

Karlsson, H.2008. *Vegetation Changes and Forest-Line Positions in the Swedish Scandes during Late Holocene. Anthropogenic Impact vs Climate*. Acta Universitatis agriculturae Sueciae 2008:31. Umeå: Swedish University of Agricultural Sciences.

Karlsson, N. 2006. *Bosättning och resursutnyttjande. Miljöarkeologiska studier av boplatser med härdar från perioden 600−1900 e.Kr. inom skogssamiskt område*. Studia archaeologica Universitatis Umensis 21. Umeå: Umeå University.

Kuoljok Eidlitz, K. 2011. *Den samiska sitan och vinterbyarna. En utmaning*. Dissertations and documents in cultural anthropology 10. Uppsala: Uppsala University.

Liedgren, L. G, I. Bergman, G. Hörnberg, O. Zackrisson, E. Hellberg, L. Östlund, and T. H. Deluca, 2007. Radiocarbon dating of prehistoric hearths in alpine northern Sweden. Problems and possibilities. *Journal of Archaeological Science* 34(8): 1276–1288.

Liedgren, L. and I. Bergman. 2009. Aspects of the construction of prehistoric stállo-foundations and stállo-buildings. *Acta Borealia* 26(1): 3–26.

Liedgren, L. and L. Östlund. 2011. Heat, smoke and fuel consumption in a high mountain stállo-hut, Northern Sweden. Experimental burning of fresh birch wood during winter. *Journal of Archaeological Science* 38(4): 903–912.

Manker, E. 1960. *Fångstgropar och stalotomter. Kulturlämningar från lapsk forntid*. Acta Lapponica 15. Stockholm: Geber.

Mulk, I. M. 1994. *Sirkas: Ett samiskt fångstsamhälle i förändring Kr.f.−1600 e.Kr.* Studia archaeologica Universitatis Umensis 6. Umeå: Umeå University.

Mulk, I. M. 1993. Comments on Sami Viking Age pastoralism – or "the fur trade paradigm" reconsidered. *Norwegian Archaeological Review* 26(1): 28–34.

Serning, I. 1956. *Lapska offerplatsfynd från järnålder och medeltid i de svenska lappmarkerna.* Acta Lapponica 11. Stockholm: Hugo Geber.

Sommerseth, I. 2009. *Villreinfangst og tamreindrift i Indre Troms: belyst ved samiske boplasser mellom 650 og 1923.* PhD thesis. Tromsø: University of Tromsø.

Storli, I. 1993. Sami Viking Age pastoralism – or "the fur trade paradigm" reconsidered. *Norwegian Archaeological Review* 26(1): 1–20.

Tanner, V. 1929. *Antropogeografiska studier inom Petsamo-området. 1. Skolt-lapparna*. Fennia 49: 4. Helsingfors: Geographical Society of Finland.

Tomasson, T. 1988. *Några sägner, seder och bruk upptecknade efter lapparna i Åsele- och Lycksele lappmark samt Herjedalen sommaren 1917.* Dialekt- och folkminnesarkivet Serie C5. Uppsala: Dialekt- och folkminnesarkivet.

Zachrisson, I. 1984. *De samiska metalldepåerna år 1000−1350 i ljuset av fyndet från Mörtträsket, Lappland*. Archaeology and environment 3. Umeå: Umeå University.

Wallerström, T. 2017. *Kunglig makt och samiska bosättningsmönster. Studier kring Väinö Tanners vinterbyteori.* Instituttet for sammenlignende kulturforskning. Serie B skrifter 165. Oslo: Novus.

Wallin, J-E. 2011. *Stalonjargga, Padjelanta nationalpark, Virihaure. Vegetationsförändringar och kulturpåverkan under ca 500 år. En undersökning baserad på pollenanalys.* Unpublished excavation report. Jokkmokk: Ájtte Mountain and Sami Museum.

Wallin, J-E. 2012. *Suollagavallda, Valldajåhkå – vegetationsförändringar under 5000 år. En undersökning baserad på pollen och kolpartikelanalys.* Unpublished excavation report. Jokkmokk: Ájtte Mountain and Sami Museum.

Östlund, L, G. Hörnberg, T. H. DeLuca, L. Liedgren, P. Wikström, O. Zackrisson, and T. Josefsson. 2015. Intensive land use in the Swedish mountains between AD 800−1200 led to deforestation and ecosystem transformation with long-lasting effects. *Ambio* 44(6): 508–520.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

7

Were there really 'East Saami Winter Camps' in Northern Scandinavia?

Thomas Wallerström

Abstract

During the early 20th century, the Skolt Saami of Petsamo gathered for 4–5 months annually in special winter camps after spending the summer months in smaller groups dispersed throughout their resource area. The winter rest provided time to formulate the *norrāz* common assembly institution's policy towards the nation states and other Saami groups, dispense justice, and allocate resources according to need.

The geographer Väinö Tanner (1881–1948) believed that, prior to state formation, all hunter-gatherer Saami in Fennoscandia had this seemingly pre-state institution, and that it was preserved among the Skolt Saami because they lived so far from the centres of state power. His theory (Tanner 1929) has been widely accepted as a model, or analogy, in archaeological and cultural-historical research.

This article summarises my critical study of the 'Winter Camp Theory' (Wallerström 2017). In this study, I challenge the theory on empirical grounds using archaeology, vegetation history, and the analysis of written sources. Furthermore, I contend that the theory is based on a weak empirical basis, a vague methodology, and an obsolete cultural-theoretical framework. Certain 17th-century maps of the region do not depict a pre-colonial Saami cultural geography as the theory suggests, but rather the places where the recently taxed Saami had their settlements.

'The East Saami analogy' is consequently no longer a source of self-evident knowledge, as many researchers have previously assumed.

Keywords: Skolt Saami, Saami settlement patterns, state formation, vegetation history, Väinö Tanner.

7.1 Introduction

A little over a century ago, the Finnish geographer, geologist, diplomat, and university professor Väinö Tanner (1881–1948) visited the Skolt Saami winter villages. These were only occupied for a few winter months each year (Figure 7.1). The Skolt Saami lived by hunting, fishing, and small-scale reindeer herding. During the course of an annual cycle, families moved independently between different stations prior to gathering together during the winter.

Winter was a time for socialising and maintaining equipment, but it was also the time when the Saami's highest decision-making body – the *norrāz* – assembled, led by a 'president' elected from

* Norwegian University of Science and Technology (NTNU), Trondheim, Norway, thomas.wallerstrom@ntnu.no

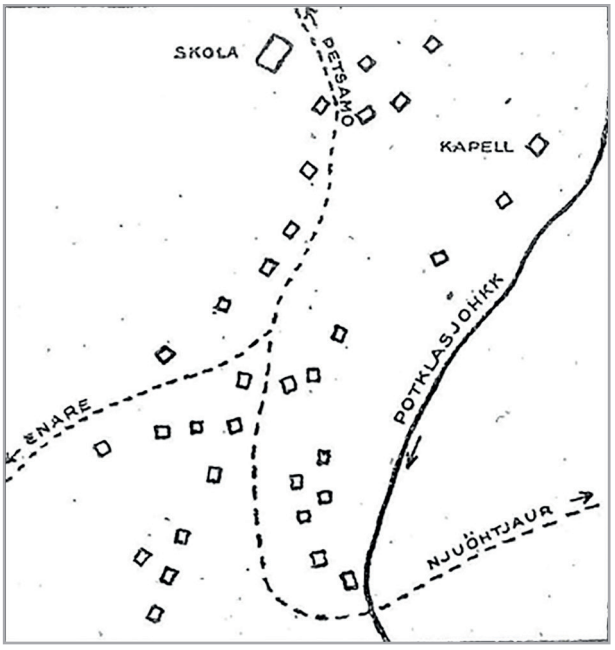


Figure 7.1: The Skolt Saami winter village Suenjel, Petsamo, as mapped by Kjuril and Jakko Sverdloff 1920 (Tanner 1929: 198). The map covers 1 km².

among the heads of families. The *norrāz* was also a court which dispensed its own non-state justice and formulated policies in relation to the states (Norway, Russia, Sweden, and Finland) and other Saami groups. It also allocated access to natural resources according to need (Tanner 1929: 345–385).

This culture was characterised by the *siida* and winter camps, which Tanner (1929: 86–87, 399–402) believed to have been common to 'all' Saami before reindeer herding and maritime fishing became specialised economies. According to Tanner, it would 'previously' have been distributed throughout the Saami area (1929: 411–416). Saami society had 'always' been organised in *siida* groups living together in specific areas (Sw.: *samebyn* or *'lappbyn'* in older research).

Both Swedish Lapland and a part of Finland are divided into 'lapmarks' (Sw.: *lappmarker*). Each lapmark contained a number of *siida*, loosely grouped around the main river systems. The term *siida* refers both to a group *and* its habitation area, and, following the change to reindeer nomadism, it also denoted a reindeer breeding community (Tanner 1929: 87–88; Koponen 2005: 392). Different spellings occur: *sīt, siita*, *siida, sijdda, sijd, sijtt, sijtte, sita* (Mulk 1994: 1–3; Lundmark 2006: 1).

The terms 'winter camp', 'winter village', 'winter gathering place' and 'communal winter camp site' are used synonymously in research to describe the Saami central places that were occupied in the darkest and coldest period of the year – at least according to Tanner's Winter Camp Theory.

7.2 The Winter Camp Theory

Väinö Tanner generalised, claiming that all hunter-gatherer Saami in Fennoscandia previously practised this culture of winter camps in which Saami *siida* overwintered from December to April (1929: 227–229). He characterised this practice as a 'survival' from pre-state times in the north, preserved here as a result of these communities' distance from centres of state power and colonization (1929: 7–8, 36, 57–62).

In Tanner's (1929: 389) opinion, symbols that looked like Saami tents (*kot*) that were drawn on the first maps of Swedish Lapland (dated 1611 and 1643) depicted winter camps and a Saami cultural geography (Figure 7.2–7.4*;* for the 1643 map, see Ahnlund 1928). The Finnish ethnologist Helmer

Tegengren accepted his theory, incorporating the winter camp as an annual gathering site in his reconstruction of the extinct forest Saami culture in the northern Finnish Kemi *lapmark* (1952: 127).

Figure 7.2: Andreas Bureus' map *Lapponia* (1611). (Photo: Royal Library, Stockholm, Sign KoB1na.)

Figure 7.3: Arvidsjaur (Irmijeerfui). Detail from the 1611 map.

Figure 7.4: Detail from the 1611 map: Rounala (top left) and Markkina (represented by the nameless church symbol).

Both Tanner's theory of winter camps and Tegengren's reconstruction of the settlement pattern of the Kemi Saami were cited in virtually all subsequent studies of the Saami in the past, including those conducted by archaeologists, historians, cultural geographers, legal historians, and cultural researchers in various disciplines (Wallerström 2017: 19, 22, 49–52, 58–62). 'The East Saami analogy' or 'the East Saami model' functioned as an 'ethnographic parallel', and the winter camp was perceived as a *base camp* in the theoretical models that described Saami ways of life prior to the era of specialised reindeer herding and maritime fishing (Wallerström 2017: 49–62; cf. Mulk 1994: 248; Bergman 1995: 198–199; Karlsson 2006: 68–74).

The theory has a genealogy that includes K. B. Wiklund, professor of Finnish-Ugric Languages at Uppsala University (Tanner 1929: 402; Wallerström 2017: 52–55). In the course of nine pages in the Swedish legal historian Åke Holmbäck's (1922: 28–36) investigation into the historical origins of the so-called *lapskatt* areas, Wiklund described the Skolt winter camps, arguing that they had also been found in the West Saami area.

His main argument for the existence of the winter camp institution in the west was the place name derived from *talvatis*, a Saami word for winter, and an alternative name for the church and market places in Arvidsjaur and Jokkmokk, and therefore a supposed indicator of the presence here of winter camps (Wiklund in Holmbäck 1922: 33–34; Tanner 1929: 87, 388–389, 402; cf. Bergling 1964: 147–150; Korhonen 2005).

Tanner´s theory became widely accepted. However, building on research undertaken in Russia, the theory's chief critic, the ethnologist Kerstin Eidlitz Kuoljok, argued that the legal institution of *norrāz* highlighted by Tanner was not an ancient Saami institution, but rather a product of Russian legislation stemming from the abolition of serfdom in 1861. As her first critical article (1987) was barely noticed, she subsequently reiterated and expanded on her criticism in book form (Eidlitz Kuoljok 2011, see Wallerström 2017: 71).

Despite this and other critical or sceptical comments (Beach 1981: 59–60; Lundmark 1982: 67–70; Fjellström 1985: 41–44; Aronsson 1991: 109; 2009; Berg 2001; Karlsson 2006: 153, 164; Hansen and Olsen 2014: 167–168, 177), the Winter Camp Theory became axiomatic, especially among archaeologists inspired by the 'processual archaeology' paradigm that swept through North Scandinavian academic institutions during the 1970s (Wallerström 2017: 58–62, 66–67). According to Eidlitz Kuoljok (2011: 9–10) the theory's significant impact in earlier research circles was caused by various factors. These include the following: authoritarianism; difficulties in bridging traditional disciplinary boundaries; the fact that the few engaged scholars were reluctant to critique each other's research findings; that Saami and North Scandinavian research is rarely thorough and comprehensive;

that the theory suited Saami ethnopolitical endeavours; and, more recently, it satisfied the processual archaeological requirements of 'ethnographic parallels' (Wallerström 2017: 222–224).

But does this axiomatic theory actually reflect historical reality? According to Kerstin Eidlitz Kuoljok, the theory is not valid for the Petsamo area for which it was formulated. Given this criticism, why should it therefore be regarded as being valid for northern Scandinavia? This is an important question, not least because the Winter Camp Theory's validity until recently has never been systematically scrutinised in northern Scandinavia.

7.3 An empirical testing of the Winter Camp Theory

In a recent book (*Kunglig makt och samiska bosättningsmönster. Studier kring Väinö Tanners vinterbyteori*, in English: 'Royal Power and Saami Settlement Patterns. Studies concerning Väinö Tanner´s Winter Camp Theory', Wallerström 2017), I challenge the Winter Camp Theory on empirical grounds using archaeology, vegetation history, and an analysis of written sources and maps.

In addition to an evaluation of the theory's culture-theoretical framework, the significance of place names derived from *talvatis* (winter) used to support the theory is also examined. Furthermore, I discuss the historical context in terms of the establishment of the state in Swedish Lapland at around AD 1600, at which time the principle of the territorial state was implemented in northern Scandinavia. In this, it is important to distinguish between 'state time' and the theory's 'pre-state' time (Wallerström 2017: 23). The following main research questions were investigated:

a) Were there in fact 'Skolt Saami winter camps' in northern Scandinavia?

b) Are these putative winter camps actually marked on Andreas Bureus's map *Lapponia* (1611) and Olof Tresk's map of Torne *lapmark* (1643) as Tanner (1929: 388–389) believed?

c) What happened when the territorial state principle was implemented in the north? Were existing pre-colonial winter camps used as political outposts? What *happened* to the people? How did the ruling authorities think?

7.4 Background

This critical study originated as an interdisciplinary investigation involving historical archaeology and vegetation ecology which was originally planned to complement Tanner's generally accepted theory.

Research questions were formulated regarding the age of the institution, changes in functions through time, cultural relations, and ongoing processes of power. At the outset, it was assumed that the many people who gathered in a limited area (the winter camp area) would have significantly affected vegetation growth. This would have registered in the local vegetation history, allowing it to date the origin of the winter-camp institution, which is impossible using only historical or archaeological data.

The processing of material from previous excavations in Arvidsjaur was planned as were archaeological investigations in Rounala. The vegetation history at an additional locality was studied; namely, the site of the first church in Enontekis, which was relocated after the 1808-09 war with Russia (Bygdén 1923 II: 60). This abandoned post-medieval church site and marketplace, now called Markkina, was partly excavated by Petri Halinen in 1990–1991 and 2000–2001 (letter, December 19th 2001; Lahti 2006: 286–287; Wallerström 2017: 21, 115–116).

Contrary to expectations, Väinö Tanner's theory was not corroborated by these vegetation-historical 'supplementary investigations'. Consequently, it was decided to test the theory against other historical

and archaeological source material, in which traces of the winter camps should have appeared, or at least indicated their probable existence. In addition, its culture-theoretical framework was scrutinised. The empirical data were interpreted in their respective chronological, political, and culture-specific contexts; i.e. the so-called contextual tradition in archaeology (Wallerström 2017: 27–29).

7.5 The vegetation history analysis

The vegetation history analysis carried out by Ulf Segerström and Eva-Maria Nordström showed that human impact on vegetation in Arvidsjaur can indeed be traced back to the late medieval period, but also that this early impact was very limited. It is only with the establishment of a rectory during the mid-18th century (Bygdén 1923 I: 98; Bylund 1956: 89) that a major impact on local vegetation history can be discerned (Segerström, Nordström and myself, two chapters in Wallerström 2017: 132–134).

Corresponding results were obtained in today's Markkina, where a rectory was also established in the mid-18th century (Bygdén 1923 II: 60; Wallerström 2017: 121–122). Similar intensification did not occur in Rounala despite the presence here of a church and an adjoining cemetery in the medieval period, judging from radiocarbon dating of human remains (Lidén, Fjellström and myself in Wallerström 2017: 282–308). This must be due to the fact that, at the beginning of the 17th century, the Saami were directed to move to Markkina with its existing church and marketplace established and organised by Daniel Hjort on the orders of the king (Wallerström 2017: 177–180). No rectory was built at Rounala (see Wiklund 1916).

The impact of humans and domestic animals on vegetation was surprisingly limited in all three localities. According to the theory, those who paid taxes while occupying the winter camps with their households during four winter months would have constituted a far larger population than that represented by the inhabitants of the rectories in 1601: 32 households in Arvidsjaur, 21 in Rounala, and 31 in Enontekis/Markkina (Hoppe 1945: 53; Wallerström 2017: 132–134). However, it is the environmental impact of the two rectories that features most prominently in the vegetation history.

7.6 Written sources and toponyms

Two historical documents are crucial to the critique of the theory. The first is a report written by King Karl IX's emissary Daniel Hjort (1606) and the second is King Karl IX's response to complaints from Saami who were to be given a church and marketplace in Enontekis/Markkina (Wallerström 2017, Appendixes 1 and 3). It is apparent from Karl's response (1604) that it was necessary to persuade the Saami to go to the site of the church and marketplace. If the Winter Camp Theory was correct, this would have been unnecessary since the Saami would have already been staying at this supposed winter site. Furthermore, detailed accounts of the Saami given by the clergy of the *lapmarks* in the 1670s do not mention this phenomenon. Other contemporary sources also suggest a reality *devoid* of Saami winter camps (Wallerström 2017: 136–139).

An evaluation of the *talvatis* place name as an indicator of the presence of winter camps is also appropriate since, as mentioned above, they were important to K. B. Wiklund´s version of the theory (see also Tanner 1929: 87, 402). As many as 24 such place names are identified only in the parishes of Jokkmokk and Gällivare. Given this large number, it has been concluded that it is too common a name to be regarded as testimony for the existence of winter camps. Instead, it simply refers to places

in a winter landscape (pers. comm. Dr. Kjell-Åke Aronsson; Wallerström 2017: 164–165). The alleged relationship between winter camps and the *talvatis* place names therefore seems speculative.

7.7 Archaeological sources

Several previous archaeological studies have set out to provide archaeological support for Tanner's theory (see Wallerström 2017: 141–148). For example, Inga-Maria Mulk's (1994) attempt to find the winter camp for the Sirkas sijdda in Lule *lapmark* was preceded by extensive landscape surveys and the construction of theoretical models for testing. Mulk (1994: 233, 260–261) found that *sijdda* probably did not live in *one* given place during the winter but were rather dispersed across a larger area. Kjell-Åke Aronsson's (2009) archaeological investigation of the designated camp site for the Tuorpon sijdda, also in Lule *lapmark*, did not provide evidence to support the Winter Camp Theory, the validity of which he also questioned.

An additional major systematic survey is a study of Saami settlement patterns in Pite *lapmark* by the archaeologist Nina Karlsson (2006). Karlsson utilised vegetation history, soil chemistry, and geophysical methods, and tested archaeological models of Saami seasonal movements. She identified no winter camps and found that the site most resembling a winter camp in Sweden is Arvidsjaur with its church and marketplace. It also has an alternative name (*talvatis*) associated with winter (Karlsson 2006: 84, 153, 164). However, and as mentioned above, this place name probably does not relate to a winter camp. Furthermore, neither the vegetation history analysis, nor archaeological investigations conducted in Arvidsjaur indicated a significant 'ancient' human presence (i.e. a winter camp) predating the market place, church and rectory. While a few late-medieval artefacts were identified, more numerous finds from more recent times were also found (Wallerström 2017: 93–94, 160–161; see Lundholm 1968; Liedgren 1997).

The best-known archaeological site resembling a winter camp is the Nukkumajoki complex in the northern Finnish Inari, Kemi *lapmark* (Figure 7.5). Christian Carpelan and his team investigated several localities here with relatively robust settlement structures that may have been habitable during

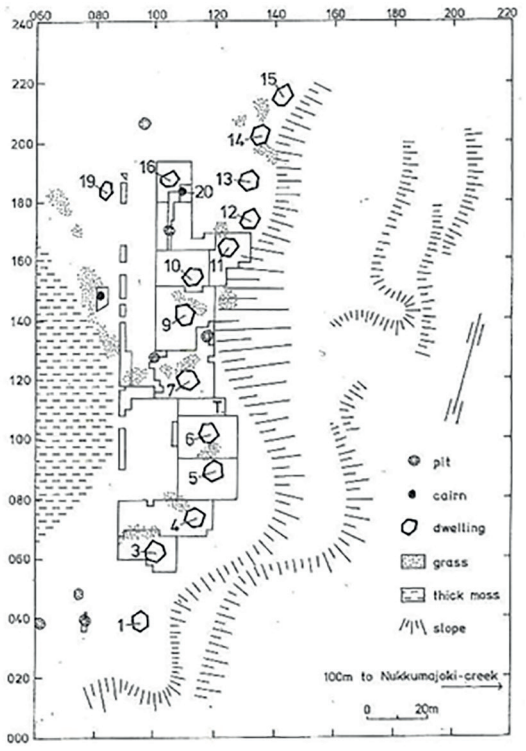


Figure 7.5: Nukkumajoki 2. An alleged Saami winter camp which has been archaeologically investigated (Carpelan and Kankainen 1990: 359).

the winter. The artefacts found are mainly of recent date, but some date to the late medieval period (Wallerström 2017: 155–158; see Carpelan and Kankainen 1990; Carpelan and Hicks 1995; Carpelan 2003: 71, 73). These compare more closely to the Skolt Saami settlements, although there are differences too (Wallerström 2017: 158–160). For example, Tanner described small cottages, which existed in Skolt Saami villages at the beginning of the 20th century, while the Nukkumajoki complex contains timber huts (Figure 7.1 and 7.5).

The somewhat doubtful similarities between Nukkumajoki and the Skolt Saami winter camps can best be explained by the fact that this community, the Inari *siida*, was formerly part of a 'united' Russian, Swedish, and Danish-Norwegian taxation area (Hansen 2011), and was consequently to some extent taxed similarly to the North-Russian Skolt Saami. There may therefore have been an outpost for taxation directed from Russia, Sweden and Denmark-Norway located here. Archaeologically similar localities are not known in northern Scandinavia, which may be due to the fact that Russian taxation systems did not extend this far west (Wallerström 2017: 162–163; see Hansen 2011).

Many archaeologists have identified localities with hearths in long alignments of 5–10 rectangular hearths, usually stone-built, indicating that they were used during winter, or at least when it was cold (for example Bergman 1990; Hedman et al. 2015). However, archaeological investigations do not provide convincing evidence that they represent winter camps of the type described by Tanner (1929: 198–199; see Figure 7.1). Instead, these may be places where 5–10 nuclear families gathered during the winter, essentially small communities that would not necessarily have required the *norráz* institution with its representative assembly and 'president'. Consequently, it cannot be assumed that these so-called hearth rows represent a single, collective, habitation site equivalent to the Skolt Saami winter camps (Wallerström 2017: 148–154).

7.8 An obsolete cultural-theoretical framework

The Winter Camp Theory depended on a specific cultural-theoretical framework. Both K. B. Wiklund and Väinö Tanner (1929: 402; Wiklund quoted in Holmbäck 1922: 28–36) embraced early 20th-century cultural theory, particularly the notion that one could expect the occurrence of *survivals* – that is, the preservation of 'cultural stages' in peripheral areas; in this case, an 'original' Saami institution that escaped state influence.

Wiklund and Tanner also assumed the existence of different consecutive 'culture stages', a cultural theory current during their day. The stage with winter camps, one of the first, was thought to have 'survived' into the 20th century in the Petsamo area and was described by Tanner. Furthermore, they espoused the tenet of so-called 'culture circles', which postulated that human culture could be described as a relatively limited number of cultural circles (of which the Saami was one).

The notions of survivals and culture circles have, in common with the concept of diffusionism and Tanner´s ecological determinism, all been abandoned in mainstream anthropological research, and the same is true about his retrospective method, i.e. uncritically projecting seemingly old cultural structures backwards in time (1929: 8–9, 11, 18, 23, 25, 36, 47–53, 58, 61, 87, 99, 330–331, 386, 389, 402, 407, 412–416; cf. Hultkrantz 1960: 91–95, 174–176, 224–227; Berg 2001; Harris 2001: 164–169, 374–379, 382–383; Trigger 2006: 217–223, 315–319; Eidlitz Kuoljok 2011:16–21).

Cultural loans ('diffusionism') and migrations were the main explanations for cultural change in academic circles at the time. The Winter Camp Theory's Saami were thought to have migrated to northern Scandinavia from the east bringing the institution with them (Tanner 1929: 18–28, 406; Wallerström 2017: 57). Tanner's theory is consequently largely based on a now long-abandoned cultural-theoretical framework, especially the theory of survivals (Wallerström 2017: 56–57; see Berg 2001; Eidlitz Kuoljok 2011 *passim*).

7.9 Discussion

As described, it has proved difficult to find support for the Winter Camp Theory, whether vegetation-historical, historical, or archaeological. The theoretical framework for the theory is obsolete, and the toponymic '*talvatis*-argument' is clearly speculative. Moreover, the 17th-century written sources that 'should' have mentioned the phenomenon seem instead to convey a reality *without* winter camps. Despite this, might the Saami nonetheless have had other forms of gathering places or otherwise important places that the cartographers chose to depict?

Tanner (1929: 389) assumed that tent-like symbols on two maps dated to 1611 and 1643 showed the sites of the winter camps. As other sources do not corroborate the Winter Camp Theory, one has to ask whether these cartographic symbols actually represent something else, and, if so, what?

One might begin by asking why such maps were needed? Do they really depict a pre-colonial cultural geography containing winter camps as Tanner and others after him maintained, or, alternatively, might these maps be the instruments of an expanding state, as recent researchers have suggested? (Wallerström 2017: 185–186; see Ehrensvärd 2006: 127–132; Strandsbjerg 2008; Wood 2010: 33).

The written sources, including maps, are, in my opinion, best understood in the context of contemporary politics. Since the maps were drawn up at a time of territorial expansion, the nature of state activity must be taken into account in their analysis. It is relevant to discuss the expression of royal power in Swedish Lapland around AD 1600, including the establishment of church sites in these landscapes, where both the Saami, Birkarlians, and Swedish Bailiffs interacted, as well as taking into account the Saamis' experience of the implemented principle of the territorial state. Birkarlians (Sw: *birkarlar*) were farmers from the estuaries along the Gulf of Bothnia who held a medieval royal privilege to trade and raise taxes among the Saami (Luukko 1956 a–b). These rights were taken over by the Crown's bailiffs during the reigns of Gustav Vasa and Karl IX, thereby marginalising the Birkarlians.

Juridical-political relationships of this type must be taken into account when interpreting the source material, including the maps. Laws were taken into use to consolidate the Early Modern Scandinavian states, using the laws of the ancient Roman Empire and the contemporary Holy Roman Empire of the German Nation as models (Wallerström 2017: 29–38, 189–192). The active use of these power doctrines united the outermost periphery of the north with the central parts of Sweden to the south, and beyond that to Europe (Päiviö 2011: 80–82).

In light of this, answers to the following questions should be sought: Are the putative winter camps actually marked on Andreas Bureus's map *Lapponia* (1611) and Olof Tresk's map of Torne *lapmark* (1643) as Tanner (1929: 388–389) believed? What happened when the territorial state principle was implemented in the north? Were existing pre-colonial winter camps used as political outposts? What *happened* to the people? How did the ruling authorities think? Why was the 1611map actually required?

7.10 The cartographic evidence viewed in a wider context

Tanner (1929: 389) assumed that tent-like symbols drawn on two maps dated to 1611 and 1643 depicted Saami winter camps. As noted above, contrary to expectations, the vegetation-historical studies registered little impact by humans and domesticated animals on three of these places (Segerström, Nordström and myself in Wallerström 2017: 132–134).

Consequently, it is relevant to ask what functions the three investigated sites had before they became the church sites? Did these places emerge as a result of the needs of the Saami, the Birkarlians, or the Crown's bailiffs? In the answer lies a clue to the type of localities the 17th-century cartographers depicted (Wallerström 2017: 169–181).

Vegetation development was not influenced by humans until about 1100 BC in Markkina, and not until about the 1st century AD in Rounala, while probably not until about AD 1400 in Arvidsjaur. At Rounala and Markkina, human influence in the vegetation record increased during the Iron Age, especially from around AD 800, a time now distinguished cultural-historically by emerging small-scale herding of reindeer and the occurrence of many imported metal objects among the archaeological finds in the north of Fennoscandia (Wallerström 2017: 173–175; see Aronsson 1991: 102; Storli 1994: 96; Hedman 2003: 198, 223–225, 2015; Andersen 2011; Bergman et al. 2013 on the emerging reindeer breeding; Serning 1956, 1960; Sjøvold 1974; Zachrisson 1976; Huurre 1987; Uino 1997: 197 regarding the metal objects. See also Henriksen 1995 on the production of train-oil for a market in the adjacent part of northern Norway, c. 800-1200).

In Markkina and Arvidsjaur, historically documented rectories left the greatest impression in the pollen diagrams. Rounala had no rectory, although the church and its adjoining cemetery were already established in the Middle Ages (Lidén, Fjellström and myself, Appendix 4 in Wallerström 2017: 301–302).

It is possible that Markkina might have been used as a resting place on trips along the Torne River catchment, which formed part of a route connecting the North Atlantic to the Gulf of Bothnia and the Baltic (Wallerström 2017: 174 –175). Rounala was situated on the Saami migration trail to Norway (Manker 1953: 59, 65). The pollen chart from Arvidsjaur, however, does not indicate a human presence there during that early period, although the 17th-century church seems to have had a medieval precursor (Bygdén 1923 I: 97; Bergling 1964: 163).

Interestingly, it is evident from the cartographer's commentary to the 1643 map that the Saami previously used Rounala as a gathering place, but that the church and market place in Enontekis (today's Markkina) were then already in use (Wallerström 2017: 177–179; the map and the commentary are published in Ahnlund 1928).

The functions of the church and marketplace in Markkina are highlighted in the royal letter of 1604 (Wallerström 2017, Appendix 3). Not only were the Saami supposed to attend them to hear the Word of God and pay their taxes to the bailiff, they were also supposed to give the bailiff first refusal of their goods (Wallerström 2017: 179–181). Their goods were to be weighed and measured with equipment provided by the bailiff, and merchants would be present.

The bailiff, as the king's representative, was now a prioritised buyer of goods from the *lapmark*. The Birkarlians were completely outmanoeuvred – their tax-levying role had already ceased in 1554. Those who took part in illicit trade did so on penalty of death. Karl IX's reforms came into effect quite rapidly, as shown by the bailiffs' records (Bergling 1964: 150 f.; Wallerström 2017: 177).

It is also demonstrated (Figure 7.6-7.7) that the church buildings in Rounala and Arvidsjaur lay centrally in relation to the distribution of settlements of the *siidas* (at least those identified from the 18th century, Wallerström 2017: 169–173). The church in Markkina was not similarly centrally located. Rather, communication was probably the crucial factor in its siting, since it was a place that was easy for the Crown's bailiffs to reach, located as it was at the intersection of lines of communication between the Gulf of Bothnia, the Atlantic coast (the Lyngen and Alta fjords) and the Arctic Ocean (the Varanger fjord).

Viewed in this broader context, it seems unlikely that the symbols on the first maps of Swedish Lapland (1611, 1643) that Tanner thought resembled Saami tents (*kot*) in fact depicted the locations of winter camps. Rather, they were depictions of places considered important enough to be represented on these maps. But what kind of places were they? And why was Andreas Bureus´ map required in 1611?

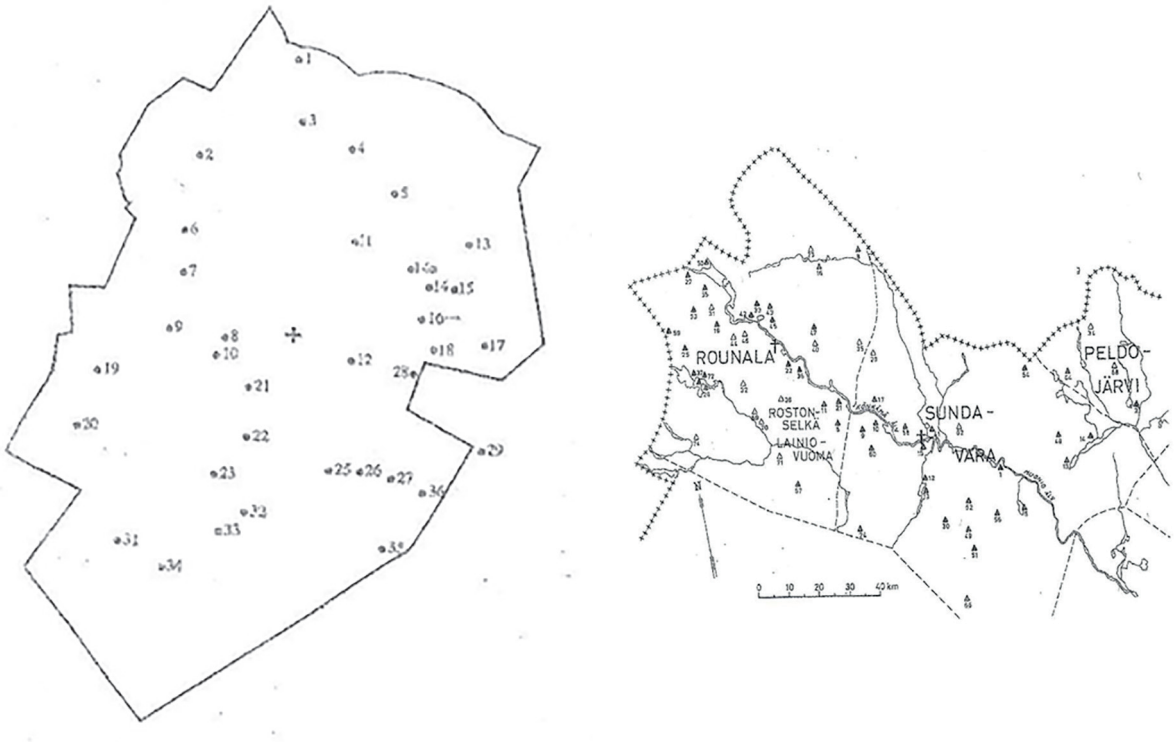


Figure 7.6–7.7: The churches of Arvidsjaur, Rounala and Enontekis/Markkina in relation to the distribution of seasonal settlements of the siidas according to 18th-century sources (Marklund 2015:8; Arell 1977:241; churches added). The Peldojärvi Saami had no church of their own.

7.11 The political context

The written sources from around 1600 are greatly concerned with contemporary initiatives that attempted to clarify the northern border between Sweden and Denmark-Norway. This territorialisation of royal power had begun under Gustav Vasa in the middle of the 16th century, pausing during the years of power struggles after his death in 1560. Karl IX eventually resumed his father's ambitions (for example Olofsson 1965: 3–87).

The territorial state was a socio-political innovation of the 16th century (Maier 2016: 1–2, 75–76). Following its introduction, people could now be taxed solely on the basis of their presence within a defined state territory. The decades around the year 1600 were characterised by rivalry between competing emerging states regarding the division of partially overlapping taxation areas; some Saami groups paid taxes to two or even three different nation states, a situation which had become unsatisfactory. The historical nation states – Sweden, Denmark-Norway and Russia –were at this time engaged in the process of attempting to create territorial boundaries in northern Fennoscandia (Wallerström 2017: 30–34, see for example Olofsson 1965: 45–87; Hansen & Olsen 2014: 257–262).

In attempting to understand the processes involved in shaping the Saami societies at the time in question, one must take into account historical legal conditions, including rights of ownership to land and water. Similarly, one cannot ignore political conditions, such as, in this instance, Sweden's attempt to gain control over the Atlantic coast in the north and contemporary royal political centralism.

Power doctrines were enforced on the Saami in the name of the king. They included the claim of *iura regni*, 'the rights of the kingdom' in *bona vacantia* (wilderness), as well as the doctrine of *dominium.* The regal juridical claim to supremacy in *bona vacantia* is usually mentioned in research as forming a legal basis for the Swedish state's presence in Sápmi, but the *dominium* doctrine is also relevant, being a restriction of a previously undivided right to ownership, a European-wide approach

to ownership introduced by Gustav Vasa's chancellor Conrad von Pyhy, a German administrator who had been working for the Roman-German emperor (Päiviö 2011: 80–81). Accordingly, ownership came to be regarded as a hereditary use right (*dominium utile*) that could be confiscated and legally given to another person, such as in the case of mismanagement by a household which reduced its taxation potency, a law which was also applicable among the Saami (Korpijaakko-Labba 1994: 364; Päiviö 2011: 41). Paying taxes was now, together with the *dominium* doctrine, regarded as recognition of the recipient's undivided *dominium directum,* in this case the recipient being the king (Inger 1997: 99).

The doctrine of *dominium* was new to Sweden when it was introduced among the Saami and the settled population around 1540, while *iura regni,* and royal claims in *bona vacantia* had a long history among Scandinavian medieval kings who sought to enforce a continental model of supremacy over valuable natural resources (Rosén 1949: 35–47; Hamre 1968: 698–701; Prawitz 1968: 701–705; Päiviö 2011: 80–81; Wallerström 2017: 34–38). 'Rights of the kingdom' were introduced among the coastal, agrarian settlements beside the Gulf of Bothnia to the east of Swedish Lapland from the 14th century onwards (Wallerström 1995: 27–30, 295–306).

Politics, law, economics, and the enforcement of power doctrines were means of expanding the power and reach of the Early Modern nation state. In the present case, this includes emerging ideas about state sovereignty and the appropriation of the population's resources, as manifested in the claim of *iura regni* ('the rights of the kingdom'), supremacy in *bona vacantia* (wilderness), and the *dominium* doctrine's concept of shared ownership (*dominium utile, dominium directum*). The novel technology of mapmaking (in effect, 'data bases') was also adopted, as mentioned above (Wallerström 2017: 34–38, 184–189).

7.12 Implementing the territorial state principle

It is evident that the kings of Denmark-Norway and Sweden tried to implement the principle of the territorial state current at their time. According to this principle, the same area could not simultaneously be Swedish and Danish-Norwegian, and conflicts consequently arose between these states.

As part of this process, they needed to know which Saami paid taxes to which king, and where the taxation areas were located in relation to 'presumed national borders'. By paying taxes, one was now considered to be accepting of the authority of the recipient state, a 'proof' that the taxpayer was the subject of the recipient, a subjugative legal relationship which in the long run now gained political and territorial importance (Wallerström 2017: 33–34, 187–189, 194–195).

During the introduction of the principle of the territorial state, the Saami were questioned about who they paid taxes to annually, the intention being to reorganise overlapping taxation areas (Wallerström 2017: 189–192). During hearings, it emerged that the Saami initially gave gifts to outsiders implicitly in exchange for being allowed to live their lives peacefully and undisturbed (Campbell 1948: 20–22; Guttormsen 2005: 214). From the perspective of the doctrine of *dominium,* these gifts were subsequently redefined as taxation, and proof of the taxpayer's subjugation. From the Saami perspective, however, gifts were regarded as a form of insurance against unpleasant situations. The Saami word for a gift to strangers (*værro*) is the same as that for a sacrificial victim of their pre-Christian cult (Solem 1933: 247; Campbell 1948: 21–22; Wallerström 2017: 187–188).

Consequently, an anonymous contemporary critic who participated in taking evidence from Saami witnesses stated that the respondents could barely distinguish between taxation areas and state territories and provided answers that they thought their questioners wanted to hear (Steckzén 1964: 81; Wallerström 2017: 193–194). The use of violence in the course of tax collection is mentioned frequently in Swedish, Danish-Norwegian and Russian diplomatic sources of the 16th century, especially

the century's latest decades, and the beginning of the 17th century (Johnsen 1923: 68–69, 72–77, 79, 81, 85, 88, 90, 101, 124–129). However, following the so-called Kalmar War (1611–1613), which devastated parts of southern Scandinavia, Sweden was forced to abandon its claims over the Atlantic coast in the north (Harrison and Eriksson 2010: 361).

When viewed against this backdrop of inter-state politics, the ideal of well-defined territorial states, and the use of juridical claims of sovereignty and shares in people's property rights, it is likely that the oldest map discussed here (Figure 7.2) actually depicts the distribution of *siida* which paid taxes to Sweden. These are shown both in relation to each other and in relation to contemporary lines of communication. With churches and marketplaces located at some of these sites – one in each *lapmark* – arenas were created for contacts between the state authority and its subjects. This organizational arrangement in the landscape provided a basis for establishing economic, political and cultural power over these subjects by a variety of means, as was the case in other parts of the multicultural Swedish superpower (Wallerström 2017: 192–199).

Consequently, we can conclude that Andreas Bureus´map *Lapponia* (Figure 7.2–7.4) was an administrative document drawn up in 1611 to depict the locations of Early Modern Sweden's tax-paying Saami communities and the outposts for tax collection in Sápmi. The tent-like symbols do not represent 'East Saami' winter camps in a pre-colonial Saami cultural geography as Tanner and many others believed, but rather the places where the recently taxed Saami had their settlements (Wallerström 2017: 185–186, 192–194).

7.13 Conclusions

In this study, I have challenged Väinö Tanner´s Winter Camp Theory on empirical grounds using archaeology, vegetation history, and the analysis of written sources and maps. The theory did not withstand the test of closer scrutiny. Furthermore, it is argued that the *talvatis* place-names simply refer generally to places in the winter landscape. The alleged close relationship between winter camps and the *talvatis* place names is demonstrably speculative. Moreover, I contend that the Winter Camp Theory is based on a weak empirical basis, a vague methodology and an obsolete cultural-theoretical framework.

Consequently, 'The East Saami analogy' (or model) is no longer a source of 'self-evident knowledge', as many Scandinavian researchers have previously assumed. We should now disregard the theory and open up for alternative hypotheses and interpretations. For example, why might not winter settlements have been dispersed over extensive areas under suitable conditions? Might such dispersed settlements perhaps be represented by the so-called hearth rows, material traces possibly left by groups of overwintering nuclear families? Perhaps pre-colonial Saami gatherings took place at the best fishing spots during the summer, as suggested by Kerstin Eidlitz Kuoljok? (1991: 43–45, see Karlsson 2006: 47; Aronsson 2009: 60; Wallerström 2017: 69).

Whatever the case, empirical data must, to a greater extent than before, form the basis for research into ancient Saami settlement patterns. External conditions, such as relationships with power centres, also affected settlement patterns – at least in Northern Scandinavia. As demonstrated by the present study, the 'circumpolar winter camps', which some researchers thought could be identified in Eurasia and in (Russian) Alaska (Mäki 2004), may in fact have arisen out of the needs of the emerging nation states (Wallerström 2017: 199–204).

Acknowledgements

I would like to thank **Dr. Chris McLees** *for translating the original manuscript from Swedish and subsequent editorial comments and amendments.*

Bibliography

Ahnlund, N. 1928. Olof Tresk kartor över Kemi & Torne lappmarker 1642 och 1643. In: *Kartor över Kemi & Torne lappmarker 1642 och 1643 av trycket utgivna och tillägnade K.B. Wiklund på 60-årsdagen 15 mars 1928 av vänner*. Stockholm: Nordisk Rotogravyr.

Andersen, O. 2011. Reindeer-herding cultures in Northern Nordland, Norway. Methods for documenting traces of reindeer herders in the landscape and for dating reindeer-herding activities. *Qutarnary International* 128: 63–75.

Arell, N. 1977. *Rennomadismen i Torne lappmark – markanvändning under kolonisationsepoken i fr. a. Enontekis socken*. Umeå: Kungl. Skytteanska samfundets handlingar /Geografiska institutionens Umeå universitet Meddelande.

Aronsson, K.-Å. 1991. *Forest Reindeer Herding A.D. 1−1800. An Archaeological and Palaeoecological Study in Northern Sweden*. Archaeology and environment 10. Umeå: Umeå University.

Aronsson, K.-Å. 2009. Saami societies and the siida – Reflections from an archaeological perspective. In T. Äikäs (ed.): *Máttut-Máddagat. The Roots of Saami Ethnicities, Societies and Spaces/Places*, pp. 58–67. Publications of the Giellagas Institute 12. Oulu: University of Oulu.

Beach, H. 1981. *Reindeer-Herd Management in Transition. The Case of Tuorpon Saameby in Northern Sweden.* Uppsala studies in cultural anthropology 3. Stockholm: Almqvist & Wiksell.

Berg, E. 2001. *Arkeologi i grenseland. Bruk av (skolte)samisk etnografi i studier av førhistoriske fangstsamfunn*. MA thesis. Tromsø: University of Tromsø.

Bergling, R. 1964. *Kyrkstaden i övre Norrland. Kyrkliga, merkantila och judiciella funktioner under 1600- och 1700-talen*. Kungl. Skytteanska samfundets handlingar 3. Uppsala: Almqvist & Wiksell.

Bergman, I. 1990. Rumsliga strukturer i samiska kulturlandskap: En studie med utgångspunkt i två undersökningar inom Arjeplogs socken, Lappland. *Fornvännen* 85: 273–282.

Bergman, I. 1995. *Från Döudden till Varghalsen. En studie av kontinuitet och förändring inom ett fångssamhälle i Övre Norrlands inland, 5200 f. Kr.−400 e.Kr*. Studia Archaeologica Universitatis Umensis *7*. Umeå: Umeå University.

Bergman, I., O. Zachrisson, and L. Liedgren. 2013. From hunting to herding. Land use, ecosystem processes, and social tranformation among Sami AD 800−1500. *Arctic Anthropology* 50(2): 25–39.

Bygdén, L. 1923. *Härnösands stift herdaminne. Bidrag till kännedomen om prästerskap och kyrkliga förhållanden till tiden omkring Luleå stifts utbrytning.* Vol. I−II. Uppsala: Almqvist & Wiksell.

Bylund, E. 1956. *Koloniseringen av Pite Lappmark t.o.m. år 1867*. Geographica 30. Uppsala: Almqvist & Wiksell.

Campbell, Å. 1948. *Från vildmark till bygd. En etnologisk undersökning av nybyggarkulturen i Lappland före industrialismens genombrott*. Landsmåls- och Folkminnesarkivet Uppsala 5. Uddevalla: Hermes.

Carpelan, C. 2003. Inarilaisten arkeologiset vaiheet. In V.-P. Lehtola (ed.): *Inari- Aanaar. Inarin historia jääkaudesta nykypäivään,* pp. 28–95. Inari: Inarin kunta.

Carpelan, C. and T. Kankainen. 1990. Radiocarbon dating of a subrecent Saami winter-village in Inari, Lapland, Finland: A preliminary account. In W. G. Mook. and H. T. Waterbolk (eds.): *Second International Symposium, ^{14}C and Archaeology*, pp. 357–370. PACT 29. Strasbourg: Council of Europe.

Carpelan, C. and S. Hicks. 1995. Ancient Saami in Finnish Lappland and their impact on the forest vegetation. In R. A. Butlin and N. Roberts (eds.): *Ecological Relations in Historical Time,* pp. 193–205. Oxford: Blackwell.

Ehrensvärd, U. 2006. *The History of the Nordic Map. From Myths to Reality*. Helsinki: John Nurminen Foundation.

Eidlitz, K. 1987. Den samiska sitan – en utmaning. *Rig* 1987(3): 74–76.

Eidlitz Kuoljok, K. 1991. *På jakt efter Norrbottens medeltid. Om Nordösteuropas historia och etnologi.* Miscellaneous publications 10. Umeå: Center for Arctic cultural research.

Eidlitz Kuoljok, K. 2011. *Den samiska sitan och vinterbyarna. En utmaning*. Dissertations and documents in cultural anthropology 10. Uppsala: Uppsala University.

Fjellström, P. 1985. *Samernas samhälle i tradition och nutid.* Stockholm: Norstedts.

Guttormsen, H. 2005. *Fra istid til Læstadius. Lyngen Regionhistorie* 1. Lyngen: Lyngen bygdebok.

Hamre, L., 1968. Regale. In I. Andersson and J. Granlund (eds.): *Kulturhistoriskt lexikon för nordisk medeltid från vikingatid till reformationstid*. Vol.13, pp. 698–701. Malmö: Allhem.

Hansen. L. I. 2011. Norwegian, Swedish and Russian 'tax lands' in the North. In S. Imsen (ed.): *Taxes, Tributes and Tributary Lands in the Making of the Scandinavian Kingdoms in the Middle Ages,* pp. 295−330. Trondheim Studies in History. Rostra books. Trondheim: Tapir Academic Press.

Hansen, L. I. and B. Olsen. 2014. *Hunters in Transition. An Outline of Early Sámi History*. Leiden: Brill.

Harris, M. 2001. *The Rise of Anthropological Theory. A History of Theories of Culture*. Updated Edition. Walnut Creek: Altamira Press.

Harrison, D. and B. Eriksson. 2010. *Norstedts Sveriges historia 1350−1600*. Stockholm: Norstedts.

Hedman, S.-D. 2003. *Boplatser och offerplatser. Ekonomisk strategi och boplatsmönster bland skogssamer 700−1600 AD*. Studia Archaeologica Universitatis Umensis 17. Umeå: Institutionen för arkeologi och samiska studier, Umeå universitet.

Hedman, S.-D. 2005. Renskötselns uppkomst i Övre Norrlands skogsområden. In O. Andersen (ed.): *Fra villreinsjakt til reindrift*, pp. 13–32. Skriftserie nr. 1. Drag: Árran lulesamisk senter.

Hedman, S.-D. 2015. Stållotomter från kusten och upp till högfjällen, vad berättar de? In B. Evjen and M. Myrvoll (eds.): *Från kust til kyst.* Áhpegáttest áhpegáddáj. Møter, miljø og migrasjon i pitesamisk område, pp. 29–50. Stamsund: Orkana Akademisk.

Hedman, S.-D., B. Olsen, and M. Vretemark. 2015. Hunters, herders and hearths: Interpreting new results from hearth row sites in Pasvik, Arctic Norway. *Rangifer* 35(1): 1–24.

Henriksen, J. 1995. *Hellegropene. Fornminner fra en funntom periode.* MA-thesis. University of Tromsø.

Holmbäck, Å. 1922. *Om lappskattelandsinstitutet och dess historiska utveckling*. Statens offentliga utredningar 10. Uppsala: Almqvist & Wiksell.

Hoppe, G. 1945. *Vägarna i Norrbottens län. Studier över den trafikgeografiska utvecklingen från 1500-talet till våra dagar.* Geographica 16. Skrifter från Upsala universitets geografiska institution. Uppsala: Appelberg.

HSH = *Handlingar rörande Skandinaviens historia*, volume 39. Kungl. Samfundet för utgivande av handskrifter rörande Skandinaviens historia (Sweden). Stockholm: Elméns & Granbergs Tryckeri.

Hultkrantz, Å. 1960. *General Ethnological Concepts*. International Dictionary of Regional European Ethnology and Folklore 1. Copenhagen: Rosenkilde and Bagger.

Huurre, M. 1987. Kulturen vid Ule älvs vattendrag under den sena järnåldern. In K. Julku (ed.): *Nordkalotten i en skiftande värld – kultur utan gränser och stater över gränser*, pp. 19–34. Studia historica septentrionalia 14:1. Rovaniemi.

Inger, G. 1997. *Svensk rättshistoria.* Malmö: Liber ekonomi.

Johnsen, O. A. 1923. *Finnmarkens politiske historie aktmæssig fremstillet*. Videnskapsselskapets Skrifter. II. Hist.-filos. Klasse. No. 2. Kristiania.

Karlsson, N. 2006. *Bosättning och resursutnyttjande. Miljöarkeologiska studier av boplatser med härdar från perioden 600–1900 e. Kr. inom skogssamiskt område*. Studia archaeologica Universitatis Umensis 21. Umeå: Umeå University.

Koponen, E. 2005. Siida. In U-M. Kulonen, I. Seurujärvi, and R. Pulkkinen (eds.): *The Saami. A Cultural Encyclopaedia*, p. 392. Suomalaisen Kirjallisuuden Seuran toimituksia 925. Helsinki: The Finnish Literature Society.

Korhonen, O. 2005. Dálvvadis. In U-M. Kulonen, I. Seurujärvi, and R. Pulkkinen (eds.): *The Saami. A Cultural Encyclopaedia*, pp. 61–62. Suomalaisen Kirjallisuuden Seuran toimituksia 925. Helsinki: The Finnish Literature Society.

Korpijaakko-Labba, K. 1994. *Om samernas rättsliga ställning i Sverige-Finland*. Helsingfors: Juristförbundets förlag.

Lahti, E.-K. 2006. Bones from Sápmi: Reconstructing the everyday life of two ancient Saami households. In V.-P. Herva (ed.): *People, Material Culture and Environment in the North. Proceedings of the 22nd Nordic Archaeological Conference of Oulu, 18–23 August 2004*, pp. 284–295. Studia humaniora ouluensia 1. Oulu: University of Oulu.

Liedgren, L. 1997. Den gamla kyrk- och marknadsplatsen i Arvidsjaur, Pite lappmark – en mötesplats med medeltida anor. *Norrbotten* 1997, pp. 36–53. Luleå: Norrbottens museum.

Lundholm, K. 1968. *Gamla kyrkplatsen Arvidsjaur*. Luleå: Norrbottens museum.

Lundmark, L. 1982. *Uppbörd, utarmning, utveckling. Det samiska fångstsamhällets övergång till rennomadism i Lule lappmark*. Arkiv avhandlingsserie 14. Lund: Arkiv Academic Press.

Lundmark, L. 2006. *Samernas skatteland i Norr- och Västerbotten under 300 år*. Rättshistoriska skrifter 8. Insitutet för rättshistorisk forskning. Stockholm: Rönnells antikvariat.

Luukko, A. 1956a. Birkarlar. In I. Andersson and J. Granlund (eds.): *Kulturhistoriskt lexikon för nordisk medeltid från vikingatid till reformationstid*. Vol. I, pp. 594–597. Malmö: Allhem.

Luukko, A. 1956b. Birkarlaskatt. In I. Andersson and J. Granlund (eds.): *Kulturhistoriskt lexikon för nordisk medeltid från vikingatid till reformationstid*. Vol. 1, pp. 598–600. Malmö: Allhem.

Maier, C. S. 2016. *Once Within Borders: Territories of Power, Wealth, and Belonging since 1500.* Cambridge: The Belknap Press of Harvard University Press.

Marklund, B. 2015. *Det milsvida skogsfolket. Skogssamernas samhälle i omvandling 1650–1800*. Historiska studier: Skrifter från Umeå universitet Nr. 10/Skrifter från Centrum för samisk forskning 23/Kulturens frontlinjer. Skrifter från orskningsprogrammet Kulturgräns norr 58. Umeå: Umeå universitet

Mäki, J. 2004. The annual cycle of the settlements of circumpolar peoples. In M. Lavento (ed.): *Early in the North*, vol. 5, pp. 131–153. ISKOS 13. Helsinki: The Finnish Antiquarian Society.

Manker, E. 1953. *The Nomadism of the Swedish Mountain Lapps. The Siidas and Their Migratory Routes in 1945*. Acta Lapponica 7. Stockholm: Gebers.

Mulk, I. M. 1994. *Sirkas: Ett samiskt fångstsamhälle i förändring Kr.f.–1600 e.Kr.* Studia archaeologica Universitatis Umensis 6. Umeå: Umeå University.

Olofsson, S. I. 1965. Övre Norrlands historia under Carl IX och Gustaf II Adolf. In G. Westin (ed.): Övre Norrlands historia II, pp. 1–319. Umeå: Norrbottens och Västerbottens läns landsting.

Päiviö, N.-J. 2011. *Från skattemannarätt till nyttjanderätt. En rättshistorisk studie av utvecklingen av samernas rättigheter från slutet av 1500-talet till 1886 års renbeteslag*. Uppsala: Uppsala universitet.

Prawitz, G., 1968. Regale. In I. Andersson and J. Granlund (eds.): *Kulturhistoriskt lexikon för nordisk medeltid från vikingatid till reformationstid*. Vol. 13, pp. 702–705. Malmö: Allhem.

Rosén, J. 1949. *Kronoavsöndringar under äldre medeltid*. Skrifter utgivna av Kungl. Humanistiska Vetenskapssamfundet i Lund XLVI. Lund.

Rosén, J. 1962. Iura Regni. In I. Andersson and J. Granlund (eds.): *Kulturhistoriskt lexikon för nordisk medeltid från vikingatid till reformationstid*. Vol. 7, pp. 522–525. Malmö: Allhem.

Serning, I. 1956. *Lapska offerplatsfynd från järnålder och medeltid i de svenska lappmarkerna.* Acta Lapponica 11. Stockholm: Nordiska museet.

Serning, I. 1960. Övre Norrlands järnålder. Skrifter utgivna av Vetenskapliga biblioteket i Umeå 4. Umeå: Vetenskapliga biblioteket.

Sjøvold, T. 1974. *The Iron Age Settlement of Arctic Norway* II. Tromsø museums skrifter 10(2). Tromsø: Tromsø museum.

Solem, E. 1970 [1933]. *Lappiske rettsstudier*. Oslo: Universitetsforlaget.

Steckzén, B. 1964. *Birkarlar och lappar. En studie i birkarlaväsendets, lappbefolkningens och skinnhandelns historia*. Kungliga Vitterhets, historie och antikvitetsakademiens handlingar, Historiska serien 9. Stockholm.

Storli, I. 1994. *«Stallo»-boplasserne. Spor etter de første fjellsamer?* Instituttet for sammenlignende kulturforskning, Serie B: Skrifter XC. Oslo: Novus forlag.

Strandsbjerg, J. 2008. The cartographic production of territorial space: Mapping and state formation in Early Modern Denmark. *Geopolitics* 13: 335–359.

Tanner, V. 1929. *Antropogeografiska studier inom Petsamo-området. 1. Skolt-lapparna*. Fennia 49:4. Helsingfors: Geographical Society of Finland.

Tegengren, H. 1952. En utdöd lappkultur i Kemi lappmark. Studier i Nordfinlands kolonisationshistoria. *Acta Academiae Aboensis* 19:4. Åbo: Åbo Akademi.

Trigger, B. 2006. *A History of Archaeological Thought*. 2nd ed. Cambridge: Cambridge University Press.

Uino, P. 1997. *Ancient Karelia. Archaeological Studies*. Finska fornminnesföreningens tidskrift 104. Helsinki.

Wallerström, T. 1995. *Norrbotten, Sverige och medeltiden. Problem kring makt och bosättning i en europeisk periferi* 1. Lund Studies in Medieval Archaeology 15:1. Stockholm: Almqvist & Wiksell International.

Wallerström, T. 2017. *Kunglig makt och samiska bosättningsmönster. Studier kring Väinö Tanners vinterbyteori.* Instituttet for sammenlignende kulturforskning 165. Oslo: Novus.

Wiklund, K. B. 1916. *Rounala kyrka*. Uppsala: Almqvist & Wiksells boktryckeri A.-B.

Wood, D. 2010. *Rethinking the Power of Maps*. New York: The Guilford Press.

Zachrisson, I. 1976. *Lapps and Scandinavians. Archaeological Finds from Northern Sweden.* Early Norrland 10. Stockholm.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

8
Forest Saami heritage and history

Gunilla Larsson*

Abstract

In this paper, I will briefly present my research aiming to define, localise and interpret the archaeological remains that can be connected to Forest Saami culture and economy in the Swedish part of Sápmi, focusing on the early modern and modern period. With the help of an ethnoarchaeological method, I use ethnographic sources to understand the link between the people and the archaeological remains, and to get information on where to find them. One of the main questions is how and why Forest Saami archaeology differs from Mountain Saami archaeology, and how that is related to differences in economy. In three defined research areas, i.e. two earlier Forest Saami *skatteland* (Sw: 'tax paying districts') in the Lule river valley and a third research area, Forsa Parish in Hälsingland, new aspects of Forest Saami history have been investigated, using a combination of archaeological, ethnographic and historical sources. One aim is to bring a Saami perspective into archaeological studies, both concerning the geopolitical framework, the investigation and the interpretation of the results. Methods to be used in Saami archaeology are presented, methods that will be a part of a combined personal, academic, activist and archaeological struggle to enlighten and reclaim this heritage and history.

Key words: Forest Saami, ethnoarchaeology, archaeological survey, ancient monuments, settlement sites

8.1 Introduction and investigation areas

The purpose of this article is to bring new perspectives into research about Forest Saami archaeology in Sweden by presenting preliminary results from an ongoing study. One of the main questions is how Swedish Forest Saami have lived according to historical and ethnographic sources, and which types of archaeological remains can be found. My studies are consistently based on the belief that all research in indigenous areas should be based on the historical cultural and geopolitical geography of the indigenous people residing in the area. This includes making use of interviews and traditional knowledge to investigate and interpret archaeological remains in the chosen areas of investigation. My areas of investigations are situated within the two previous Forest Saami villages of Jokkmokk and Sjokksjokk in the Lule Saami area of northern Sweden. In addition, I have studied an area farther south, in the Forsa Parish in Hälsingland (Figure 8.1–8.2).

* Centre for Multidisciplinary Research on Racism, Uppsala University, gunilla.larsson@cemfor.uu.se

Figure 8.1: Overview map. Areas of investigations marked with X. (Map: Gunilla Larsson.)

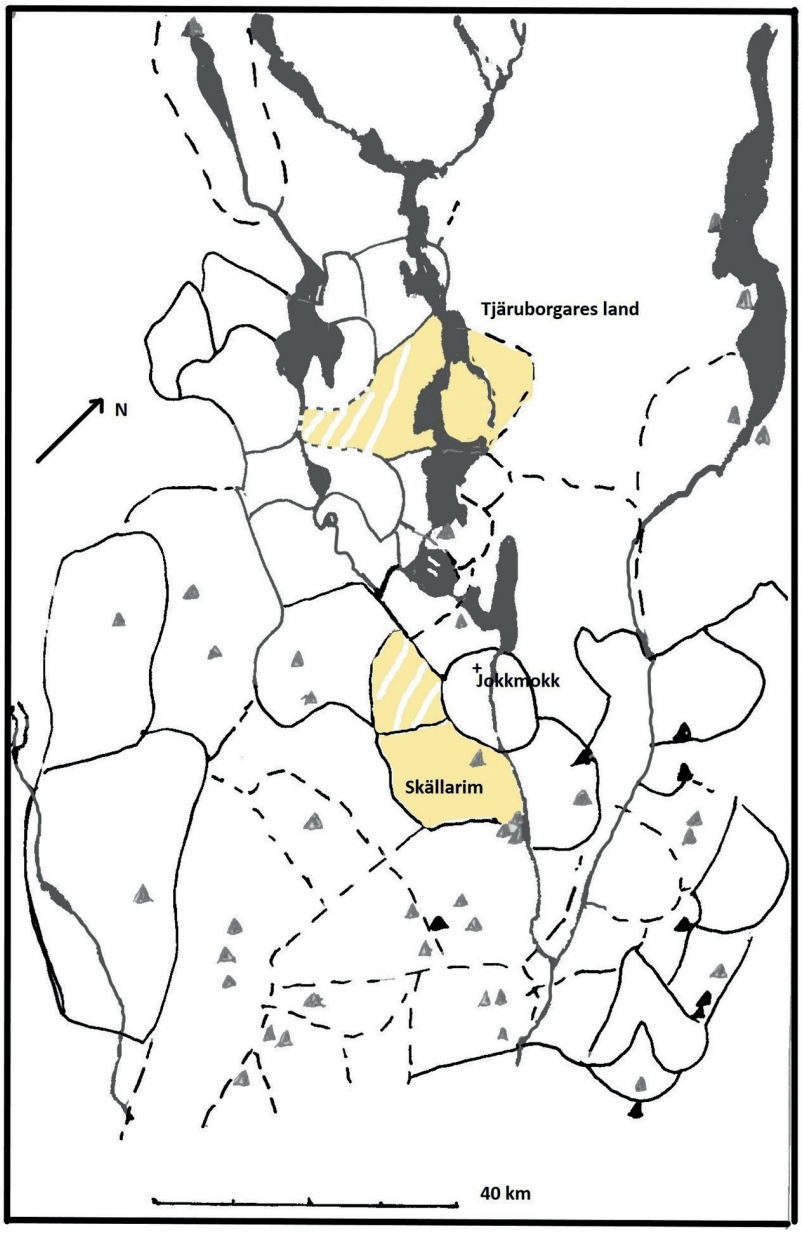


Figure 8.2: Skatteland 'tax paying districts' in Jokkmokk area based on map from Hultblad 1968:118. The investigated skatteland, Tjäruborgares land and Skällarim land, marked. (Map: Gunilla Larsson.)

When christianised as a part of a more intense colonisation by the Swedish state in the 17th century, the villages of Jokkmokk and Sjokksjokk became part of Jokkmokk Parish, together with the Mountain Saami villages Sirges and Tuorpon. The latter areas were colonised very late, and had only a few settlers before the mid-19th century. The Saami village districts were divided into local districts, resource areas for certain family groups, which when the Swedish administration entered into this region, became so-called *skatteland* (Sw), i.e. 'tax paying districts' (Lundmark 1998). One Saami in each *skatteland* was paying tax for the land as landowners and called *skattelapp*, 'tax Saami' in the Swedish administrative system, equal to *skattebonde*, 'tax farmers' who were also landowners (Korpi-

jaakko-Labba 1989, 1994). At the same time there were also existing *kronolappar*, 'Crown Saami', who did not own land but rented it from the Swedish Crown, corresponding to the *kronobonde*, 'Crown farmers' who were among the farmers who also only rented the land. The *skatteland* could be bought, sold, and inherited (Korpijaakko-Labba 1989, 1994; Lundmark 1998).

The *skatteland* was an area usually 10–20 km in diameter. A Forest Saami had one *skatteland*, where he stayed more or less sedentary throughout the year, and where there were both summer and winter pasture areas for the forest reindeer, fishing lakes, hunting areas and other sufficient economic resources. Originally, this was a designated area allotted by the Saami village to a family group, which was of sufficient size to sustain its inhabitants. The Mountain Saami, on the other hand, had an economy based on reindeer herding with summer pasture areas in the mountains and winter pasture areas in the forest. They used larger areas and generally had at least three *skatteland*, along the specified movement route for the reindeers in the summer-, and spring- and autumn pasture areas. On the way to the winter pasture areas in the forest close to the Swedish coast, Mountain Saami passed through Forest Saami *skatteland* and paid the Forest Saami owner of the land for the reindeer pasture.

In my research, the two northern research areas in Jokkmokk and Sjokksjokk were previously *skatteland* called Tjäruborgares land northwest of Jokkmokk, and the earlier *skatteland* called Skällarim, previously Vaimat-Suobbats (Hultblad 1968: 114), southeast of Jokkmokk, both beside Little Lule River. The Tjäruborgares land covered approximately 100 km², and the *Skällarim was* larger, approximately 400 km². Since the ethnographic documentation is much better for Skällarim thanks to the thorough work of antiquarian Gunnar Ullenius, the main focus has been on this area. In Norrbotten Museum Archive (NMA), there is a large number of handwritten notebooks concerning Forest Saami life in southern Jokkmokk.

At the beginning of the 20th century, both Forest Saami villages in Jokkmokk were dissolved by the government (Manker 1968). The authorities were influenced by the race biologist idea that Forest Saami were not real Saami since they did not live a nomadic life, and since not all were reindeer herders, and many were settled in houses (Lundmark 1998). Instead, Forest Saami were looked upon as a "race mixture" between "real" nomadic Saami and Swedes (Lundmark 1998; Hagerman 2015). Most of the Forest Saami land was put at the disposal of the Mountain Saami villages in the area, creating conflicts that are still going on in Saami society with the few remaining Forest Saami in Serri Saami village, which was created from the remains of the earlier dissolved villages. In the 1940s, the government created Jåhkågasska Mountain Saami villages of parts from both Sirges and Tuorpon (Manker 1947).

The third investigation area is situated in Hälsingland, an area that has been far less investigated concerning Saami cultural heritage. Since the authorities did not want to have Saami in these areas and since the 17th century had tried to move the Saami to the north, there were no Saami 'villages' or skatteland here, or relevant fiscal documents such as those found in the north. Instead, I have used source materials such as church archives and local historical literature, travel accounts (such as Schreber 1772; Swab 1940 [1796]; Schmidt 1992 [1799]) as well as interviews with local inhabitants. Another important source material is the 'ethnographic questionnaires', especially one sent from Uppsala landsmålsarkiv to informants all over the country, called "Accounts concerning the presence of Saami in Swedish districts" (*Berättelser om lappars uppträdande i svenska bygder*, ULMA 1954). In Hälsingland, the informants could tell about many different Saami present here historically; Forest Saami, 'Parish Saami' (Sw: *sockenlapp*), Mountain Saami, Saami passing the area on trading journeys, Coastal Saami, and so-called 'Beggar Lapps'.

The results of the pioneer research work by ethnographer Ingvar Svanberg, archaeologists Inger Zachrisson, Christer Westerdahl, and Bernt Ove Viklund, and also historian Peter Ericson have been taken into consideration (Svanberg 1981; Zachrisson 1997, 2006, 2010, 2011, 2012; Ericson 2003; Viklund 2004, 2008; Westerdahl 2008). For a long time, they have been the only scholars in their

disciplines addressing this topic and, in the beginning, they were questioned because this history is so unknown, even in academia. During the last few years, the regional county museums have engaged in this research too (www.ohtsedidh.se). However, the investigations have often focused only on a minority among the Saami who were employed as so-called 'Parish Saami'. It is important to note, however, that only the father in Saami families would be employed by the Parish (Svanberg 1999), while the other members of the families and many other Saami still remaining in these areas were not, so they have not been part of the discussion. This, I hope, will be changed by this article.

I chose Forsa Parish as my investigation area in Hälsingland, and here Forest Saami settlement sites documented in historical records has been visited, and archaeological monuments and artefacts preliminary surveyed and analysed. The area was previously surveyed by the National Board of Antiquities, but not for Saami archaeological remains. Southern Sápmi, outside the mountains, has never been systematically surveyed for Saami cultural heritage, since the old myth of these areas being without Saami settlement has prevailed into the 21th century. Only after 2000 did Gävleborg County Museum make a survey limited to places with Saami-related names like *Lapp-* and *Kåta-*. One site, Kåtaudden in Lake Järvsjön outside Söderhamn, was archaeologically investigated, and turned out to be a medieval Saami settlement site (Wennstedt Edvinger 2005).

8.2 Tracing Forest Saami economy and archaeological remains: Methods and material

The analysis uses a combination of different methods and source materials used in ethnographic, archaeological, anthropological and historical research, inspired by what Stig Welinder (1992) calls 'historical ethnoarchaeology'. Ethnoarchaeology is the study of things and physical environments among living humans, for which oral accounts and participant observation are also used. Historical archaeology is the archaeological study of dead humans, which can also make use of historical documents. Welinder has combined the terms into 'historical ethnoarchaeology', which he defines as "an ethnoarchaeological study of a historically documented society" (Welinder 1992: 7, my transl.). The historical knowledge of this society plays the same role as participant observation in ethnoarchaeological fieldwork, and the archaeological excavation of the remains of ancient monuments of the historical society the same role as the ethnoarchaeological study of the material culture of a living society, according to Welinder. The ethnohistorical approach is an ethnographic study of a historically known society, which can shed light on the relation between man and artefacts, in this case between people, places and archaeological remains.

My approach in this study includes four steps. The first step is to gather information, ethnographic and historical sources to map the settlement pattern and sites of importance in the annual cycle for subsistence and the economy. Descriptions, travel accounts, stories, traditions, interviews, and church archival records have been studied to locate places with settlements and economical activities, and also obtain information on how and when the sites were used. The second step has been to visit the sites mentioned in the records, see what kind of archaeological remains can be identified, and study the topography and environmental setting of the sites. Similar topographical places within the research areas will later be surveyed in order to identify and locate more remains of the local Forest Saami life and history. Preserved Saami artefacts and handicraft locally and in museum collections have also been surveyed. Archival records have given information about the families that have been living here in relation to the Swedish population and changes in life and settlement pattern. These changes have been analysed against a historical background. The third step is to choose some sites for archaeological excavation, and to answer questions like when the sites were established, how people lived on them

and at what time of the year. In my research so far, the first two steps have been almost finished in my research areas, and the third step will hopefully be conducted in the coming years. The fourth step will be an archaeological survey in the same type of environments for similar types of remains, to trace other and earlier Saami sites that could provide information about the Forest Saami history in the area.

The methods used for the archaeological survey are methods partly developed by the local office FR Nord in Luleå for the National Board of Antiquities (established 1984), with the aim of finding types of remains different to those in southern Sweden (Klang 1987: 32–58; *Fornminnesinventeringen – nuläge och Kompletteringsbehov*). New types of ancient monuments were then observed and identified, some of which were found in connection with known Saami settlement sites. In my research, I have targeted Forest Saami settlement sites and surveyed in the areas both old and new types of archaeological remains to document.

As mentioned earlier, the types of archaeological remains to be found depending on economy and livelihood. Therefore, my work has begun by analysing past Forest Saami life based on written accounts and historical material. From the 17th to 19th centuries there are descriptions, sometimes detailed, by priests working in the areas, travellers, ethnographers and scientists (Lundius 1983[1670s]; Rheen 1983 [1671]; Linné 1975 [1732]; Högström 1747; Laestadius 1831, 1833; von Düben 1873). In the 20th century, ethnographer Ernst Manker made some documentation of the remaining Forest Saami villages and their material culture (Manker 1967). Recent historical research has been done by Bertil Marklund (2015). This is a thorough investigation concerning the northern areas, while the Forest Saami south of Ångermanälven river are not documented. In archaeology, important recent contributions have been made by Ingela Bergman (e.g. Bergman 2018).

To get a Saami perspective, since the written records are mostly written by non-Saami, in all three research areas I have interviewed Forest Saami living in the area, and also visited some of the sites together with them, where their ancestors have lived. As an ethical consideration, since they do not want to appear with their names, I have chosen not to refer to all of them in the text. There is a deep bitterness at having been part of a history that attempts have been made to erase, and for not being treated as real Saami which is seen as racist. There is also a mistrust of researchers in general.

8.3 Forest Saami life, society and economy

Many popular descriptions of Saami life have been generalised according to the Mountain Saami way of life but, for the Forest Saami, life, society and economy have been very different. At the beginning of the 20th century, Forest Saami and Sea Saami were erased from historic writing due to the ideas of race biologists, and especially Herman Lundborg who travelled around in northern Sweden to show that Forest Saami were a dangerous racial mixture between 'real' nomadic Saami (the Mountain Saami) and Swedes, and also what he believed to be the degenerating effects of mixing races (Hagerman 2015). These ideas of the Saami as only a homogenous group, an exotic primitive people in the northern mountain areas consisting only of nomadic reindeer herders, were rooted in 19th-century social Darwinism and race biology have been very prevalent (Lundmark 1998: 86) and still are. It has left Forest Saami and non-reindeer-herding Saami like the Sea Saami in the shadow in archaeological and historical writing until recent decades. It also resulted in a law in 1928, where all Saami who did not have their main income from reindeer herding lost their traditional rights to land and water (Lundmark 1998), resulting in still ongoing conflicts between different groups of Saami with different access to land rights (see also Brännström in this volume). Only some of the Saami population, the Mountain Saami, previously derived their main income from reindeer herding and lived a semi-nomadic life.

Forest Saami have lived in a combined economy in the forested areas of Sápmi. Here, forest reindeer herding was practised, developed in the middle of the first millennia AD (Aronsson 1991, 2005, 2009), but equally important were hunting, fishing, handicraft and trade (Ullenius 1937: 124; Hultblad 1944: 108; Hedman 2003, 2007; Karlsson 2006: 55, with references to Aronsson 1995: 54; Marklund 2015). Some Forest Saami were not reindeer herders at all but lived from other activities such as fishing, and they were sometimes referred to as *fiskelappar*, 'fishing Laps', in the records. Of course, all Saami have hunted, fished and done crafts for subsistence, but for the Forest Saami an important part has also been to provide furs, dried fish and handicraft products for the market. In historical sources, the name *granlappar,* "spruce Laps", is sometimes used for Forest Saami (Fjellström 1986).

In archaeological research in Sweden, the focus for a long time has been on reindeer herding, but it is important to note that the situation is different in Finland, where Forest Saami archaeology has been a major topic. In recent research in Sweden, the possibility for farming in Forest Saami society has been discussed. For instance, in the project led by Ingela Bergman et al., "Cultural heritage, landscape and identity processes" (Bergman 2018), results indicate that, since the Iron Age, small-scale agriculture has been engaged in by Forest Saami, based on pollen analysis from bogs in the vicinity of settlement sites, including Udtja, not far from my research areas south of Jokkmokk (Hörnberg et al. 2014, Hörnberg et al. 2015, Josefsson et al. 2017). Saami farming was still widespread 100 years ago (Lundmark 2002: 145). A report for the government in 1923 concluded that almost half the Saami population, 43.8%, was farming (Lundmark 2002: 145). More than one third, 35.6% were living only from agriculture, while 8.2% combined farming with reindeer herding. This did not fit into the Swedish idea about 'Saaminess' and, in the Reindeer Herding Act of 1928, influenced by race biological ideas, it was stated that only Saami who lived from reindeer herding were Saami according to the law. Saami have cultivated both barley and rye among cereals. It is possible that this cultivation dates back a long way. Earlier investigations in the Tornedalen project with sampling sites closer to the coast in Västerbotten, Norrbotten and Österbotten have also revealed small-scale clearings starting at the latest in the period AD 500-1000, with cultivation of barley, rye, oats and hemp (Sundström 1983), which is long before the Swedish colonisation. According to oral traditions, hemp has been used for sails by Saami on seagoing vessels (Larsson 2007). From Hälsingland, there was some quite odd information that the Parish Saami were not allowed to enter into marriage "if they did not do farming or other allowed work" (Holmberg 1893: 33).

The accounts from the southern Saami areas in the 17th century also mention the cultivation of turnips. Lundius (1983: 29) tells that "In Uhmå Lappmarck, the Saami sow turnips in a special place, namely on their reindeer pasture grounds upon which they dig up a small area and sow turnips, but they do not grow large, only like a small apple". Umeå Lappmark was a Forest Saami area at this time. The cultivation of turnips is also mentioned in accounts in the Nensén collection from the early 19th century (Drake 1918). Among the Forest Saami in the south, sheep were also kept. Until the 16th century, the southern Forest Saami produced considerable quantities of *vadmal*, a cloth made of filted wool, for selling, as can be seen in the records of trade products from Ume and Ångermanna lappmark 1555–1561 (Fjellström 1986: 182). In the 'Sockenlappska' word list, more than 60 words were connected with agriculture and animal husbandry, which is more than the 50 words related to reindeer herding. The handicraft is reflected in 15 words related to tailor´s work, and 20 to the shoemaker's work (L-G. Larsson 2018: 191–192, 198).

Studies also shows that activities like boat-building, seafaring, smithing and, last but not least, handicraft and trade, have been important activities (Westerdahl 1987, 2008; G. Larsson 2007, 2014a, 2014b, 2015, 2019; Bennerhag 2009, 2010; Broadbent 2009, 2010). Also, the importance of taking and using bark has been observed in recent research by Ingela Bergman, together with Lars Östlund and Olle Zachrisson (2004).

Reindeer herding among the Mountain Saami is well-known, at least in summer. The annual cycle of seasonal migration and use of settlements is shaped by the reindeer pasture. The mountain reindeer migrated from the summer pasture in the mountain valleys, earlier by the Norwegian fjords, to the winter pasture by the Swedish coast in pine forest with reindeer lichen. In between, there were spring and autumn camps. Recent excavations at a summer camp site in Hellemobotten, Norway, in the Lule Saami area indicate that this kind of reindeer herding was established at the end of the Viking age (Andersson 2017). Each *sijdda* (SaaL), a group of families, had their own route used during the seasonal migration, and their own camp sites and resting places along the way.

The reindeer herding of the Forest Saami was completely different. Very little is, however, described in ethnographic and historic sources, so an important goal has been to learn more about the annual cycle of forest reindeer herding before colonisation, as well as similarities and differences between north and south. Since the summer pasture areas of the forest reindeers were on the bogs in the forest, both summer and winter pasture areas were situated within the skatteland, so the Forest Saami did not need to live a nomadic life. When and how the annual migration took place have been questions that need to be answered. Not all Forest Saami were reindeer herders. If they were, only a few reindeers were kept, for milking, transport and attracting wild reindeer during the wild reindeer hunt.

8.4 Traces of Forest Saami life and economy on the Skällarim land

Skällarim *skatteland* was situated southeast of Jokkmokk, south of the Little Lule river (see Figure 8.3), belonged to the dissolved Forest Saami village Jokkmokk, and has had an area of ca 15 x 20 km, according to the reconstruction by Ullenius (n.d.). The old name for the land was *Vaimat-Suoppatlandet* (Hultblad 1968: 114). Most of the Skällarim land has never been surveyed for ancient monuments. During the regulation of the river and damming for the Letsi hydropower plant, only the shores of the river were surveyed. Thanks to information from Saami descendants in the area and the thorough documentation by Ullenius (n.d.), the earlier settlement sites and life of inhabitants on the land could be documented.

Ullenius tells us that the settlement sites that have been used traditionally among the Forest Saami in the area were of two types called *kiedde* and *kärta* (Ullenius n.d.). *Kiedde*, in the Lule Saami language today called *giedde* (ordbok.sametinget.se), was an open camp site. *Kärta* which, in the Lule Saami language today would probably be called *gárdde* 'fence' or 'a place fenced in', was fenced in by a timber fence of a type very peculiar to the Forest Saami settlements (Ullenius 1937: 107–126; Manker 1968: 156). In Swedish, they are called *bovallar* 'seasonal pasture farm', which seems a good term since they are very similar in appearance and function as *fäbodvall*, 'summer pasture farm' for the Swedish peasants in the north. On the settlement site, there was at least one hut, *goahte* (SaaL), on the main settlement site two or more. There were also lots of timbered storage houses, ájtte, and storage pits for meat and milk sometimes called *buorna* (Johansson 1989: 66); a word for an ice storage pit is *jiegŋabuornna*. There were also drying and storage facilities like *luovve*, a raised platform, and timbered houses for goats. Huts that were used in the northern Forest Saami areas were either square, six-sided or eight-sided timber huts, or birch bark huts, which are constructed in a similar way to a turf hut (Fjellström 1986; Manker 1968).

One of the investigated sites is the main settlement site for the Rim family on the Skällarim land, which was situated close to the present village Skällarim (pers. comm. R. Harnesk, N. Nilsson, and M-B. Öhman 2016). In the surroundings is the extensive Skällarim heath with vast grounds covered with reindeer lichen, which were splendid winter pasture areas. Through the 18th and 19th centuries, various family members lived here, often siblings with their families (Hultblad 1968). Still today, descendants whom I have interviewed are settled in the village.

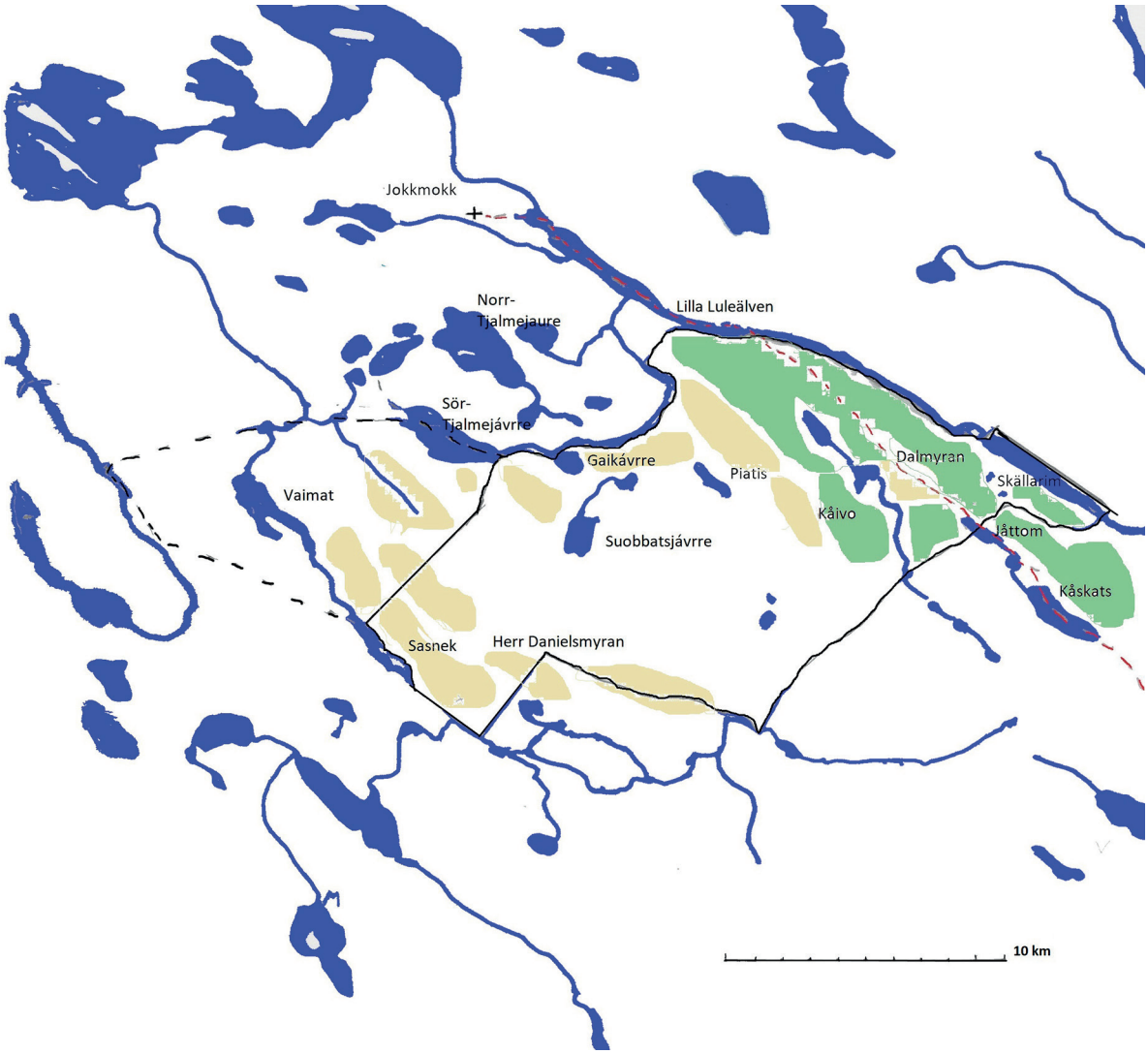


Figure 8.3: The Skällarim skatteland based on maps made by Ullenius in Norrbotten Museum Archive. The western part belonged to the land until the late 18th century. Sites mentioned in the text marked. The heath with winter pasture for the forest reindeer on the land marked with green, the bog areas with summer pasture marked with yellow. (Map: Gunilla Larsson.)

The archaeological remains were easy to find. A sudden change in vegetation was visible, from the dry heath to a bright green grass area, with juniper and herbs that like high nutrition (Figure 8.4). According to Ullenius, the *bovall* had been enclosed by a timber fence long ago so was of the type *gárdde*, but nothing of the fence remained. Here it had been two *goahtte*, of the type birch bark huts, and two timbered storage houses, of which one large storage house still remained. One of the storage houses had been used for clothes, equipment, harnesses, driving equipment for reindeers and tools. The other was for dried meat, dried fish, dried blood, cheese and other food (Ullenius 1937, Ullenius n.d.). Also visible were the remains of a big, underground storage, *buorna*, usually called 'boplatsgropar' (settlement pits) in the National Register for Ancient Monuments FMIS. Reindeer milk was mixed with herbs and stored in wooden bottles in theses settlement pits, such as the dishes *kombo* or *gompa*, reindeer milk mixed with angelica (*Angelica archangelica*) and *juobmo* made from sorrel (*Rumex acetosa*) together with reindeer milk (Fjellström 2000: 241–252; Qvarnström 2006: 16–18). Sorrel grew in large quantities on the settlement sites (Aronsson 2000) and was so popular that disputes about it were taken to court sometimes (Svanberg and Túnon 2000a). From reindeer milk, cheese was also made and stored in the ájtte. Milk products from reindeer milk were important among all Saami, and constituted two thirds of the diet around 1900 (Awebro 2000: 187).

Figure 8.4: The main settlement site for the Rim family on the Skällarim land close to Skällarim village, clearly visible as vegetation traces in the environment. (Photo: Gunilla Larsson.)

In Skällarim there had also been arrangements for storage of the type *luovve* (Ullenius n.d.), a wooden construction of which nothing remained. Close to this settlement, towards the Little Lule river, there was also a 'lying hen' consisting of a big boulder on top of three smaller ones. This is a type of ancient monument that often occurs in a Saami context. In the Forest Saami area, such stones have represented a guardian spirit for the settlement and something to which sacrifices could be made. They

have often been interpreted by researchers as altars (B. Johansson 1999 based on B. O. Viklunds material; Westerdahl 2008: 82–85).

Another settlement site was identified at Piatis, further north on the Skällarim heath. This was used by the Svart/Svärata part of the family in the early 19th century. Here a settlement site of the type *giedde* was observed, clearly visible as vegetation traces in the same way as Skällarim, and featured several house foundations and remains from timbered houses.

In spring, the families were separated and moved to different fishing lakes. Two of the families moved to spring settlement sites by Lake Suobbatjaur. The reindeer were let free and an intense period of fishing, hunting, collecting material for handicraft and tar-making started (Ullenius n.d.). By this lake, there were two settlement sites, one of which was visited. It was of the open type *giedde*, identified through lush vegetation. It was located by a small stream just north of the lake. Archaeological remains included several storage pits, *buorna*.

Important activities in spring were also to find material for handicraft. Wood for making bowls and wooden cups, wood for making skis, twigs for making whisks, roots for making baskets, birch bark and other handicraft material were collected, often for transport home next winter (Ullenius 1932: 12). Bark used to prepare skins and furs was also collected at this time. Bark for food was collected before Midsummer. The bark was roasted in big pits for several days, before being crushed and eaten in reindeer milk as a delicacy called *rueppes kuesmer* (Lundius 1983: 32). In the vicinity of the lake, there is a pine tree with traces of many collections of bark (pers. comm. G. Norstedt 2018). At Persbacka settlement on the opposite side of Little Lule River from Skällarim, many pine trees show traces of bark collection.

On a ridge close to the boat park by Lake Suobbatsjaur, near a spring settlement site on the Skällarim land (Ullenius n.d.), there are pits with remnants of charcoal, which may be the remains of charcoal-making, a cooking pit or the special pits described for roasting bark. In the lake in spring, pike and perch was caught. Pike was dried and used to be an important trading product. In the rivers, they fished for grayling and trout (Ullenius n.d.).

Until the 19th century, the Saami burned tar in several places in spring time (Ullenius n.d.; pers. comm. N. Nilsson 2015). Not far from a spring camp site, a *giedde*, by Lake Jåttomjaure, are the remains of two tar-making pits used by the Saami on the skatteland (pers. comm. N. Nilsson 2015). Like those on Tjäruborgares land, it was of the same type as the Swedish population used. Another two large tar-making pits were located at Dalmyran after information by local inhabitants just north and north-east of an enclosed settlement site, a *gárdde*. They were situated close to the old winter road to Jokkmokk. The tar was produced for selling and usually sold on the tar market held in July at the market place by Edefors, downstream on the Lule river. Before Jokkmokk was established as a marketplace in 1605, there were also markets on *Herrakiedde* and the *Talvatis* heath southeast of Skällarim (Ullenius 1937).

After Midsummer, the reindeer were again collected and those of the different families separated. Now the most intensive part of reindeer herding began, the milking season. The families moved between different summer pasture settlements. They were always situated close to bogs where the reindeers had summer pasture. On the settlement sites that were often of the type *gárdde* and surrounded by the typical timber fence, the reindeers were gathered two or three times a day for milking and resting (Ullenius 1937; Ullenius n.d.). One of the best preserved *gárdde* is the partly reconstructed *Kåivovallen*, which includes the birch bark *goahte*, remains of a goat house, a storage house and a timbered fence.

The *gárdde* found during the survey by the bog *Dalmyran* featured a small foundation for a timber house, a milking meadow, cleared areas for cultivation and the remains of an almost completely disintegrated timber fence. By the bog there was a well, so there was no need for a storage pit, since the wooden bottles with the reindeer milk products could be stored in the well instead.

The summer pasture areas that were also used on the Skällarim land were Jutsavare, Suoppatvare, Kaikjaure, S. Tjalmejaure, Sasnek and Herr Danielsmyran towards the River Appoälven. On the first four sites, settlement traces from summer camp sites were found during the survey. Behind the settlement at Kaikjaure, a construction of boulders, a so-called 'lying hen', was also found, as an important guardian of the settlement. The Forest Saami families that were not reindeer herders, instead moved to summer settlements by the fishing lakes in June.

Summer activities also included harvesting hay and leaves for the goats. Hay was taken by the Skällarim creek. Ullenius mentions the use of small timbered lodges that he calls *störhus* (Sw), where people could overnight during the harvest (Ullenius n.d. with drawing). The remains of one such house that he mentions was located beside a bog.

From August and to Michaelmas at the end of September, the reindeer were let free again and not herded. This was an intensive period of fishing, hunting and bird-hunting. The Little Lule River area beside Skällarim was famous for its salmon-fishing spots, the best in the whole river (Ullenius n.d.). Salmon was caught with fish spears and a trap net called a *not*. Fishing with a *not* was also done in Tjalmejaur. By that lake, there was one timbered storage house for the fishing equipment, but no remains have been found. Fishing using nets was also done on the land in Suobbatjaure, Kojkaure and Sörtjalmejaur. The fish that were caught were salmon, trout, grayling, perch, pike and roach. Fishing with hook and fishing spear was also done in the lakes (Ullenius n.d.).

Ullenius says that, in Skällarim, birds were trapped with a type of trap called a *flake* (Sw) at Jottomvare, by Larve, Koivokielas and Piatis. Traps for capercaille, so-called *tjädervin* (Sw), existed on Jottomvare, Koskatsvare, and Kåivokielas, and traps for black grouse, so-called *orrvin* (Sw) by almost every bog and lake (Ullenius n.d.), but no remains were found. The importance and methods of the bird hunt were already described in detail by Nicolaus Lundius in 1674 (1983: 16–18). We have not recorded any archaeological remains from bird hunts in the surveyed areas.

At the end of September, the reindeer herd was gathered and the families moved to the main camp again. The reindeer herd was herded and kept together throughout the winter, and protected against predators. In winter, from the 17th century, trading journeys were also made to the present market place in Jokkmokk in early February, and before that close to Herrakiedde by Borgarbackarna, south-east of Skällarim land. The site was situated by the winter road, documented by Ullenius and retraced by local inhabitants of Skällarim (Ullenius n.d., pers. comm. R. Harnesk 2017). Surveys here uncovered traces of fireplaces at the site. In olden days, Edefors had a market, which continued to be used in summertime until the 19th century and, before the Saami were forced to move inland, a market was held at Heden outside Luleå.

At the Forest Saami settlement sites by Skällarim and Kojkaure, older archaeological remains such as fire-cracked stones, debris from the manufacture of quartz tools and a quartz arrowhead were also found.

8.5 Traces of Forest Saami life and economy on the Tjäruborgares land

The *skatteland* 'Tjäruborgares land' (Hultblad 1968: 72) was situated on an island almost encircled by Little Lule river, north-west of Jokkmokk (see Figure 8.2), earlier within the Jokkmokk Forest Saami village before it was dissolved by the government. The *skatteland* was approximately 10 km wide. Lake Randijaure in the south-east and Lake Parkijaure in the west have been regulated and dammed for electrical power plants. The island has three bigger mountains: Påtjunåive, Råvvåive and in the south Átjek, which was a holy mountain and one of the most important sacred places in olden

days for the Saami along the Lule river, devoted to the god Átjek/Tor (Manker 1957: 192–193). A cave here has been interpreted as having been connected with the sacrificial site and was one of few earlier registered places (Jokkmokk Raä 48: 1–2). A survey along the banks of the river was made before the building of the hydroelectric dam, resulting in the discovery of a few stone age settlement sites close to the island. The National survey for ancient monuments in the 1990s was mainly further upstream of Little Lule River towards the Kvikkjokk area. Since a mine is planned in the area called Kallak (Gállok), an archaeological investigation was made in 2011 by Norrbotten County Museum (Lundmark and Palmbo 2011; *Miljökonsekvensbeskrivning Kallak Norra provbrytning*). This resulted in many new registered ancient monuments.

My survey was performed in 2012. Central on the land is Lake Gállokjaure, famous for its fishing, and a lake whose name is also a Saami surname, Kallok (pers. comm. T. L. Tuorda 2012). On the northern side of the lake are bogs, and here two open settlement sites of the type *giedde* were found. This was a perfect place with possibilities for summer pasture on the bog and fishing in the lake. At one of the sites on the northern side of the lake, located beside a bog, the old remains of a timber hut (Jokkmokk Raä 4939) that had been observed earlier by local inhabitants was identified together with a storage pit, a so-called *buorna* (Larsson 2015). The hut had been a timber hut of the traditional Forest Saami type with walls of three rows of timber, which supported a pyramid-shaped roof. The notches where the timbers were connected were of a type that was used until the 18th century in some areas (Arnstberg 1977). However, a study by the author of the connections used on the remaining timber huts from the 18th century in Arvidsjaur indicates that, in Lapland too, the more modern vertical notches came into use at this time, which indicates that this hut was older.

The other settlement site by Lake Gállokjaure was at a place a little elevated in the terrain and where a small stream passed beside it from the lake. Here, the foundations for a timber hut or timbered house were discovered (Jokkmokk Raä 4947), together with traces of fireplaces. It had foundations of supporting stones for the first round of logs for the square timbered building. Two storage pits were found (Figure 8.5). In the vicinity were good bogs for the summer pasture of the Forest reindeer. Fire-cracked stones were also found at the settlement site.

Figure 8.5: Storage pit, buorna, on a Forest Sámi settlement site beside Gállokjaure. (Photo: Gunilla Larsson.)

Remains from commercial activities in Tjäruborgares land include tar production, as in Skällarim. The inhabitant of the land in the 18th century lived from making tar for selling, so he was called *Tjäruborgare*, 'the one who trades with tar', as was his land (Hultblad 1968; G. Larsson 2015). Several tar-making pits have been registered (Jokkmokk Raä 4938; Raä 4941).

One of the sites with a tar-making pit (Jokkmokk Raä 4938) was only 600 metres north-west of one of the settlement sites by the lake (Figure 8.6). This was of the same type and construction as the tar- making pits used by Swedish peasants, with a funnel-shaped pit, built on a slope, with a furrow to a pit below for the tar barrel.

Figure 8.6: The tar making pit (Raä 4938), close to the settlements by Gállokjaure. (Photo: Gunilla Larsson.)

The survey by Norrbottens Museum also revealed several traces of another commercial activity, bark recovery, and several trees with traces were identified (Lundmark and Palmbo 2011).

Another source of income that has left no traces was pearl collecting (Hultblad 1968). In an earlier article, I wrote about the *bårre* (SaaL), which was specially built and used for collecting the pearl shells from the bottom with a scoop (G. Larsson 1997, 2007). During my surveys, I found remains of these log rafts in many places in other areas (G. Larsson 1997).

A commercial activity that has always been important to the Saami is trade, according to all sources. Trading journeys left maritime archaeological traces here, as the 'Tjäruborgares land' is situated along Little Lule River, one of the main trading routes between Sweden and Norway. Transport was boats, which were pulled on portages on land beside the rapids (Larsson 2006). These portages were called *mårka* or *muorkke* (SaaL). The remains of two portages were identified during the survey (Figure 8.7), passing beside the rapids between the lakes Parkijaure and Skalka, called 'the old *muorkke*' and

Figure 8.7: The old portage on Tjäruborgares land, where boats on journeys were pulled on land beside the rapids between Parkijaure and Skalka in Little Lule River. (Photo: Gunilla Larsson.)

'the new *muorkke*'. On 'the old *muorkke*', the boats had also been pulled on the portage between the lakes (pers. comm. Jerry Tjärnlund and Elisabeth Ek in Björkholmen, 2012). It was used by both travellers and merchants, and someone who described this *muorkke* and travelled here was Carl von Linné on his journey in Lapland in 1732 (Linné 1975). When tourists started to travel in Lapland and Kvikkjokk, 'the new *muorkke*' was established. Tourists came by boat along Lake Parkijaure to the beginning of the portage where a house to rest in was situated, walked along the *muorkke*, and took the next boat further upstream on Lake Skalka.

Since this land was surveyed for only four days, and there are more bogs on the island that have never been surveyed, there may be more Forest Saami settlement sites that are not known on the land. There are no detailed written accounts about Forest Saami life and settlement sites as on the other *skatteland* in my investigation, Skällarim, but the knowledge from Skällarim was used to find the archaeological remains in Tjäruborgares land, concerning a topographical setting for the settlement sites and the types of remains to be found.

8.6 Forest Saami traces in Forsa Parish, Hälsingland

My investigation areas in the Middle of Sweden, Forsa Parish in Hälsingland (Figure 8.8), are situated in areas with a multicultural society, where Saami and Germanic peoples lived together for millennia (Zachrisson 1997, Larsson 2019). In the early modern and modern period, Saami, Swedes, Roma and Finnish people have lived together and depended on one another here. The different ethnic groups have been specialised in different kinds of works and handicrafts.

Many Saami were probably previously living in Central Sweden, but in the 17th and 18th centuries there were royal orders for the Saami to be displaced from these areas to an inland area in the north (Stiernman 1733: 2570–2571, 1753: 866). A decree in 1671 stated that Saami should be imprisoned in irons until they agreed to move north (Stiernman 1753: 866). After new decrees in 1720 and 1723 (Stiernman 1733: 2570–2571), partly because King Fredrik blamed the Saami for bad hunting seasons (Tervalampi 2017), the Saami were not only captured and taken to prison, but prison transport was also arranged to ensure that they reached the area where they were allowed to live, which partly later became geographically specified and known as 'Lapland'.

The peasants protested against the deportations (Svanberg 1999: 33). In 1730, they asked for permission "…to keep one or two Saami as they are necessary and convenient for much household work and handicrafts, such as fishing equipment, baskets and other things, which are of the nature that the inhabitants here neither can make such things, nor want to do it." (Uppsala landsarkiv, letter of 13 Nov 1730). This is the background for the 'Parish Saami-institution' with so-called *sockenlappar,* 'Parish Saami' (Svanberg 1999). One Saami family in each parish was allowed to stay and, just like the parish had a parish shoemaker, tailor and carpenter, there was now also a Parish Saami, the father in the Saami family, who was supposed to put horses, dogs and cats to death, work that Swedish people did not want to do and looked upon as unclean.

Saami were also esteemed hunters who were good at hunting and killing wolves and bears , which were a threat to the cattle, something that the peasants mentioned in their protest letters against the displacement of Saami from the area. Saami hunted the wolves on skis, maybe a Saami invention, while Swedes used trapping pits that were not effective. A very well-known hunt was in 1727, when the Saami Joen Andersson and his son Olof Jonsson killed the famous Enånger Bear that for a long time had harassed the peasants and killed many domestic animals. It was here in Forsa Parish on a hunt for lynx between Blackås and Fuskås that they killed this bear (Broman 1954: 743).

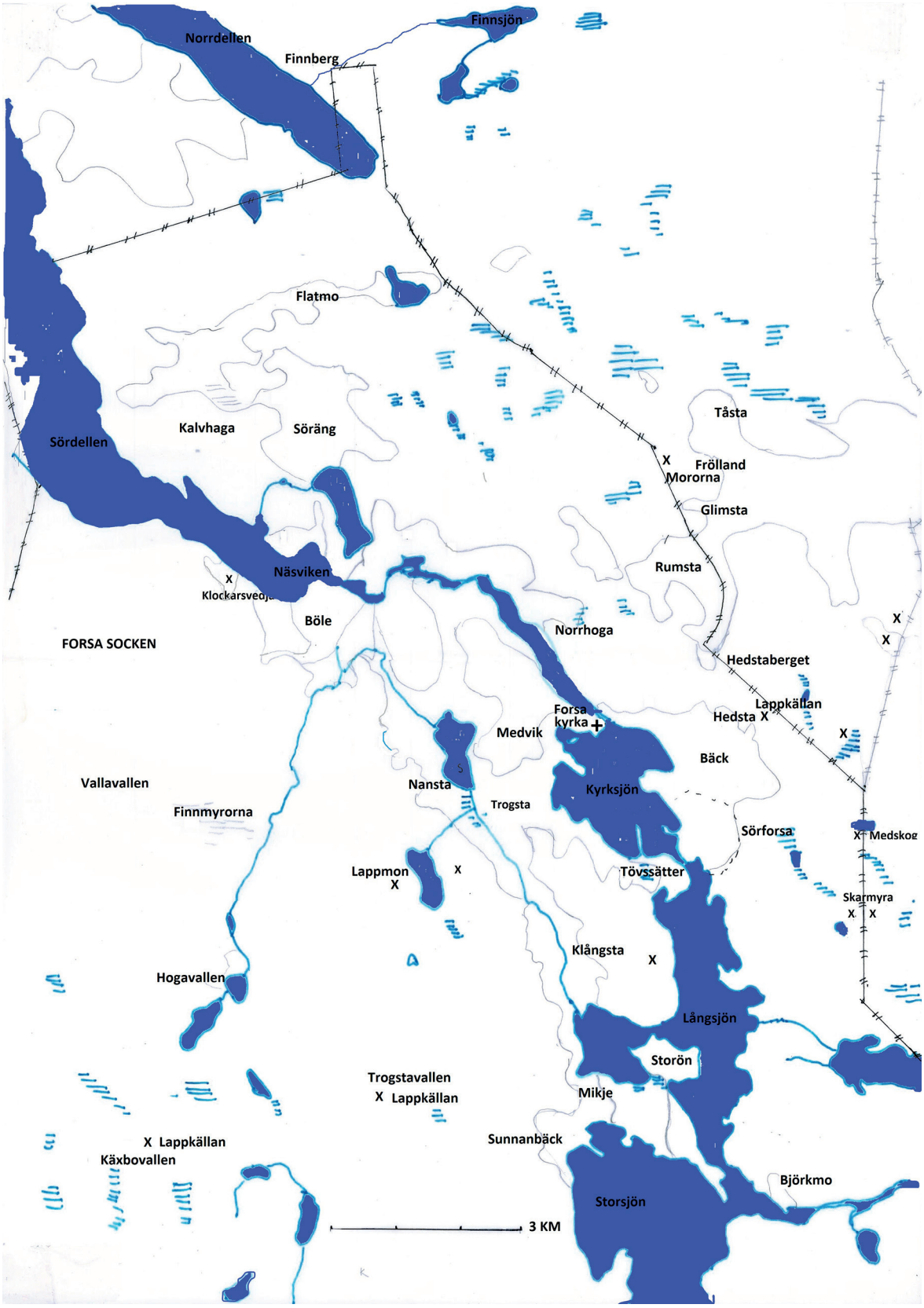


Figure 8.8: The area of investigation in Forsa Parish, Hälsingland. Sites mentioned in the text marked on the map. (Map: Gunilla Larsson.)

Despite earlier efforts to force the Saami to move, old people in their answers to the questionnaires in the ethnographic investigation in 1954 could tell much about all the Saami remaining in these areas (ULMA 1954), and among the groups of Saami living here there were also Forest Saami.

In Forsa Parish, according to church archives from the 18th and 19th centuries, Saami lived at at least eight sites (Figure 8.8). These were all situated in remote places in the forested areas, close to the parish borders. The 'Parish Saami' of Forsa Parish lived at Skarmyra. Several Saami families lived at Medskog at the beginning of the 19th century. Of these, the father of one family, Lars Jonsson Häll was called *'stadslapp'*, i.e. 'town Saami', in the church archives (Birth and baptism rolls 1774–1831, Marriage roll 1815, Death roll 1826), and he had the same work as the Parish Saami in the countryside, but served the inhabitants of the parish of Hudiksvall. The present land owner Erik Nilsson said that, in addition to the usual work of a Parish Saami such as killing horses, dogs and cats, he also castrated animals and helped to dig graves at the Hudiksvall Parish graveyard (pers. comm. E. Nilsson 2015). The other families at Medskog, and also the Saami living on the other documented sites in Forsa Parish, were Forest Saami with a subsistence mainly from handicraft and trade.

Medskog is one of the best-preserved Forest Saami localities in Forsa (Figure 8.9), where forestry has still not destroyed the archaeological remains. On the farm of the land owners, a lot of Saami handicraft products are preserved (Figure 8.10), made by the Saami who lived at Medskog (shown by the landowner Erik Nilsson 2015). Recorded before a recent forest clearing campaign, one site was registered and saved (Forsa Raä 315), including foundations for an almost square timber house, foundations for a timbered storage house, both with support stones for the first round of logs, a settlement pit, and the remains of an underground cellar.

Figure 8.9: A coffee break during documentation of a storage pit at Medskog, Forsa Parish. (Photo: Gunilla Larsson.)

Figure 8.10: A basket made by Sámi living at Medskog in the household of the landowner. This was used for carrying food to festivities among the peasants, a so-called *förningskorg*. (Photo: Gunilla Larsson.)

The house is preserved, but in approximately 1900 was moved by the landowner at that time to the island Storön on Lake Långsjön where it was rebuilt and used as a summer pasture farm (pers. comm. E. Nilsson 2015). When it was rebuilt, it was extended with a hall and chamber to be a so-called *enkelstuga* (Sw) 'single house', the most common older Swedish house type in the northern half of the country (Erixon 1947). It was still possible to measure the size and shape of the original Saami-built house, which had been 3,8 x 4,5 meter, with one single room and an open fireplace in the corner. Another similar Saami timbered house moved from the forest at Lapparne in Norrala Parish to Skärså by the coast (pers. comm. M. Frelin 2015) to be used as a summer house, was measured by the author and had originally been of similar size and shape, ca. 4 x 5 m with one room. It had later been extended like the house at Medskog by the Swedish couple that moved it to the present location to be used as a summer house. It corresponds with similar house foundations found in Saami contexts in other areas of Hälsingland, Gästrikland and Uppland (Wennstedt Edvinger and Ulfhielm 2004: 25, G. Larsson 2020). At Kåtaudden in Järvssjön outside Söderhamn in Hälsingland, the author documented a house foundation in 2015, ca. 4 x 5 m and one room, and by Ingboviken in Tärnsjö, Nora Parish, Uppland, a preserved house built by the Parish Saami at the end of the 18th century (pers. comm. L. Pettersson 2015, great grandson of the last Parish Saami here). An examination of that house by the author revealed that the now extended summer house originally had also been an almost square house, ca. 4 x 5 m, with only one room, like the other Saami houses I have so far recorded in Central Sweden.

Not far away, east of the settlement remains in Medskog, was a *vall* (Sw), an old pasture area of the same size and with the same vegetation traces of grass and herbs as the *gieddelgárdde* (SaaL) On, for instance, the Skällarim land, I recorded something that may have been a milking ground for reindeer.

On the edge of the clear cutting by Medskog, east of the settlement site, was a possible tar ditch with traces of charcoal. A 'traditional type' of tar-making pit was observed beside the medieval Saami settlement site at Kåtaudden in Järvssjön (Wennstedt Edvinger and Ulfhielm 2004; Wennstedt Edvinger 2005). Informants in Hälsingland often talk about Saami tar-making. For instance, in Rengsjö Parish, the local inhabitants could show the exact location of the tar pits used by 'Lapp-Thomas' and 'Lapp-Dora' who lived on an island in Skidtjärnen, and who had big production of tar for trading purposes. These, however, were of a different kind to the traditional ones, a type today called *tjärtrattar*, built on flat land with the vessel for collecting the tar at the bottom of a funnel-shaped pit. The '*tjärtratt* type' of the tar-making pit resembles a prehistoric pit for making charcoal, and has also been registered in Rengsjö (for instance Rengsjö Raä 104). In recent years, similar tar pits have begun to be found in different places in Central Sweden. Maybe it is worth examining a possible connection with early Saami settlement sites in the area.

The present landowner at Medskog is Erik 'Västerängarn' Nilsson in Sörforsa. On his farm, lots of handicraft artefacts made by the local Saami were found. There were baskets for bread, baskets for carrying food to festivities (Figure 8.10), so-called *förningskorgar* (Sw), and baskets for the storage of wool, all bound in a technique that the 18th-century peasants complaining about the displacement of Saami said that only Saami could make (see above). Nilsson also preserved belt pockets with tin embroideries of the type called *lomma* (Sw) made by Saami women for the Swedish women´s traditional dress in Forsa Parish, as in most parishes in Hälsingland. In the late 18th and early 19th century, a type of *lomma* came into fashion with tin or silver embroideries on broadcloth and leather. Purses and bags made in this way were typical Saami handicraft from the Middle Ages to the present day, and are a protected Saami trade mark called *'Sámi Duodji'* (SaaN). According to my opinion, several circumstances indicates that the word *lomma* in Swedish language may derive from the South Saami word *loamma*, which means 'pocket'. This kind of belt pockets/belt bags were used in Saami society long before and after the period when it was a fashion in Scandinavian dresses, and in Swedish the word *ficka* was used for ordinary pockets. Saami shackles to bags and belt bags made of reindeer antler were

known from the Viking Age until the 17th century (Zachrisson 2015). The word is already known around 1775 as *lhomma* among the southern Saami in sockenlappska, and in Lexicon Lapponicum 1780 as *lomm* (L-G. Larsson 2018: 198).

Many ancient monuments of different types were found in the forest belonging to *Trogsta*, another of the Saami settlement sites in Forsa, where according to the local inhabitants a Saami *lomma*-seamstress called 'Lapp-Elsa' lived at the beginning of the 19th century. During the survey, a trapping pit system, charcoal-making pits and settlement pits, *buorna* were recorded.

In the area in the vicinity of the Saami settlement sites, there are also remains that can be connected with hunting culture. On Hedstaberget, Ängesberget och Finntjärnsberget are registered trapping arrangements for birds made using rows of stones (Forsa Raä 17, 291 and 405). The place names are interesting; the bird trap arrangement on Hedstaberget is called Lappstan (*Lapp* is an old Swedish word for Saami), and *Finn-* in Finntjärn and Finntjärnsberget, may derive from the Old Norse word for Saami, *Finn*, still used in the name of the region Finnmark in Norway.

There are some indications of a prehistoric and medieval Saami presence in Forsa Parish. A so-called *fångstmarksgrav,* 'hunting ground grave', (Forsa Raä 210) at Nansta has been registered and excavated. It was a remote lonely grave in the forest (Zachrisson 2014: 45). Its appearance, location and content distinguish this type of grave from the contemporary 'Germanic' graves. The latter are located close to the agricultural areas by the villages, are constructed as earth- covered mounds and contain funereal gifts. The grave was investigated in 1969 by Fredriksson Hoberg. It was said to be a male burial ground, and among the objects there were two skin-scrapers of Saami type. Funereal gifts also included a dog, a larger mammal and an iron tool for woodwork (SHM inv.nr. 29211). A similar hunting ground grave with the same types of Saami skin-scrapers in Ängersjö Parish, Hälsingland, have been dated to the 7th century (Isaksson et al. 1977).

Another type of ancient monument nowadays associated with Saami are the pitfall trap systems. A system of four pitfalls in a row was found on the same hill as the grave described above. In Sweden, these are mainly found in areas where there has been documented Saami presence (Zachrisson 1997). Earlier they were seen as preceding the introduction of agriculture, but now we know that they continued and are still used today (Ljungdahl and Aronsson 2005). During the expansion of the agricultural settlements in Härjedalen, there was even an increase in the number of pitfalls used, and in the historical period peasants also started to use pitfalls. Single hunting pits have also been found outside the Saami area in Sweden. Placed in systems, they are in the north and date to the historical period related to the organised Saami hunting of wild reindeer (Lundius 1983; Johansson 1951, 1989), an important part of the Forest Saami economy before wild reindeer were eradicated in the 19th century (Rankama 2001). Around 1674, Lundius describes how the Saami in Umeå Lappmark made these pitfall systems and covered them with twigs and reindeer lichen to attract the wild reindeer (Lundius 1983: 22). In Central Sweden, it may have been the forest reindeer *Rangifer tarandus fennicus*, which was caught. They are specially adapted to the forested area and are bigger than the mountain reindeer *Rangifer tarandus tarandus* (Rankama 2001). Pitfall systems were used from the Stone Age until the 19th century, when hunting with pitfalls was forbidden in 1864.

In old Norse sources, Saami are often mentioned as good smiths and associated with metal handicraft. In Northern Sweden, traces of iron production have often been found at Saami prehistoric and medieval settlement sites (Broadbent and Edvinger 2009; Broadbent 2010, Bennerhag 2009, 2010). In Forsa, there were also finds of iron slag at the excavated hunting ground grave at Nansta (Raä 210) mentioned above (Isaksson et al. 1977). These find may be seen in connection with a find from the same hill in 1867 of 25 spade-shaped substance irons (Forsa Raä 329). In this way, the iron produced in the Iron Age was traded.

Locally produced Saami handicraft from Forsa parish, for instance purses, horse equipment made from reindeer antler and baskets, was found in the collections of Hälsinglands Museum, and has also

been preserved by private individuals on many farms. Trade with these products was important for the Saami living in these areas. According to the answers to the questionnaires, the Saami would travel to markets as far south as Småland, Blekinge and Skåne to trade their products (ULMA 1954, no. 22637, no. 23182). My informants said that these journeys also reached went west to Norway (pers. comm. E. Nilsson 2015). According to several informants (K. Haglund 2015, E. Nilsson 2015, C. Olmårs 2016), Saami and Swedish peasants in Hälsingland made joint trading expeditions to many towns and markets. The Saami went first with the *rajd* (Sw), which is the long row of härkar (reindeer oxen, castrated to become draught animals) pulling *akkjas* (Saami sleighs) filled with merchandise, and making trails in which the peasants followed with their horse drawn sleighs.

8.7 Comments on the results

The ethnoarchaeological survey has given valuable insight into the annual life of Forest Saami, the kinds of houses and settlement sites that were used and in the kinds of environments in which they were found. We therefore know that, for instance, foundation stones for timbered houses and the remains of timbered fences could be expected at settlement sites, besides earlier known structures. Areas beside bogs that today are left out of investigations because settlements are not expected, as in Tjäruborgares land by the Kallak mining site outside Jokkmokk (Lundmark and Palmbo 2011: 16), should be included because here the Forest Saami summer settlement sites with milking meadows of the type *gárdde* are mostly found.

On the *skatteland* in my investigation area, often two or three families lived and worked together in reindeer herding in wintertime, but were separated from spring to autumn. These results are interesting, because a similar cooperating reindeer herding group within the Saami village is called *sijdda* (SaaL) in the Lule Saami area, responsible for the herding in wintertime (Kuoljok 2011: 89). It is possible that, during taxation, an earlier Saami division of the Saami village into resource areas for such cooperating reindeer herding groups was used when the *skatteland* was created, and maybe these were called *sijdda*, an area of suitable size to sustain the families living on the land. There are no traces of large winter villages for whole Saami villages, *tjiellde* (SaaL), of the type described by Tanner (1929, see also Wallerström , this volume). As Karlsson has observed (2006) these big villages do not seem to exist in Northern Sweden. Also, in Aronsson's investigations at Maitum, the winter sites are small, for one to two families (Aronsson 2009b: 11). Available results therefore indicate that these are the winter settlement sites for the families living on the skatteland. On the Skällarim land, a similar site was the main camp at Skällarim, used when the families were gathered there in wintertime.

The ethnographic documentation shows that, in my research areas in the north, there was often one main settlement site for the families living on the land, used from autumn to spring. As in the peasant's summer pasture system in Northern Sweden, *fäbodväsendet* (Sw), in spring Forest Saami also took the animals, reindeers and goats to summer pasture settlement sites situated by bogs in the forest, and used during the milking season between midsummer and the beginning of August, where the reindeers were gathered two or three times a day for milking and resting. This is one of the most obvious differences between Forest Saami and Mountain Saami settlements. The vegetational traces are on the other hand similar, with grass and herbs indicating high nutrition in the ground because of the manure from the reindeers. When such a place was found using a special geological survey stick, the remains of hearths were identified, both from fireplaces on the milking meadow and from hearths in earlier huts. Often it was the remains of storage pits that were first found on the sites, sometimes foundations for huts, timber huts or timbered houses. In the vicinity, the remains of commercial activities and religious places like 'lying hens' were often found.

The Forest Saami settlement sites found during the survey were of two types, *giedde* without a fence, and *gárdde* with a timber fence, specific to the Forest Saami sites and very different from the fence used in mountain reindeer herding. In two places in Skällarim skatteland, the remains of a timber fence were visible.

The archaeological remains of houses and huts could also differ. While the turf hut and the tent hut *lavvú* earlier dominated as buildings among the Mountain Saami, the birch bark hut and timber huts are more specific to the Forest Saami in the Lule River valley. In southernmost Sápmi, all remains and documented houses were almost square timber houses with one room and a fireplace in the corner, which is different to the Swedish so-called 'single room cottage' with a rectangular shape including an entrance room and small chamber in addition to the main room. Support stones from timber huts were visible at Gállokjaure in Tjäruborgares land, at Dalmyran in Skällarim land and in the south at Medskog in Forsa Parish, as well as on Kåtaudden in Järvssjön. In Skällarim, there were also remains of timbered storage houses both by the main settlement site, and at the Kåivo settlement site. At Kåivo, there was also a timbered goat house, connected to a separate timber fence within the *gárdde*. The timbering technique seems to be very old and widespread in Forest Saami society, and is mentioned in all of the 17th-century accounts that served as sources for Shefferus´ *Lapponia* (1673, see *Berättelser om samerna i 1600-talets Sverige* 1983).

The Forest Saami settlement sites that I have found in the south, in documents and during surveys in Forsa Parish, are all situated in remote places in the forest, often beside roads connecting parishes, and close to the parish borders. They are situated in remote places far from agricultural society These are areas where the national survey for ancient monuments has rarely been, and they have never been surveyed for Saami cultural heritage during the national survey.

There are also Forest Saami remains of commercial activities, which have earlier not been associated with Saami, but played an important economic role. Tar production and trade, for instance, were the most obvious and were important in both north and south. Interesting is also that, in the south, tar pits of the so-called *tjärtrattar* (Sw) type, built on flat land, were seen as specifically Saami. The identified remains of that type were registered as charcoal-making pits. In the north, the other type, so-called *tjärdalar* (Sw), were used, placed on slopes and of the same types as the peasants used. In the vicinity of the historically known settlement sites, systems of hunting pits and bird catching arrangements were often found. The importance of pearl collecting among Saami, has often been dismissed. The inhabitants at Tjäruborgares land in the 18th century lived from a combination of pearl collecting, tar-making, trade and small-scale forest reindeer herding. Where there was old forest preserved in my northern research areas, traces of bark recovery could be found, supporting earlier research results concerning the importance of these economic activities. Where there was old forest preserved in my northern research areas, traces of bark recovery could be found, supporting earlier research results concerning the importance of these economic activities (Bergman et al. 2004).

My preliminary results, based on the ethnographic documentation and church archives show that most of the Forest Saami living in Forsa Parish in the 18th and 19th centuries were not 'Parish Saami'. They continued to live as before, even after the royal edicts about displacements. Handicraft for sale was very important, together with some hunting and fishing. An important observation is that many economic activities have focused on production for market, so were dependent on market demand, which changed over time and space. Earlier ethnographic accounts about Saami (such as Fjellström 1986) were guided by a presupposed view that the Saami economy was primitive, handicraft was for household use rather than being larger, specialised handicraft for market that is evident from my material. In the research areas, beside the production of tar for market, the production of handicraft products for market, like the production of baskets, ropes, fishing equipment and belt purses was also made to meet the needs and demand of Swedish agricultural society. It linked these ethnic groups to one another. Especially in the south, according to the answers to the questionnaires, letters, travel

accounts and local history books, the production of handicraft and trade journeys were the main sources of income for the Forest Saami families.

Handicraft was often combined with small-scale reindeer herding. The reindeer were used as draught animals on trading journeys together with the peasants to markets in Sweden and Norway. These journeys have left archaeological remains such as the occurrence of the remains of Saami handicraft in museum collections and on farms. The remains of Saami portages, *muorkke*, are another kind of archaeological remains from trading journeys, but by boat, as documented in Tjäruborgares land.

8.8 Conclusion

Forest Saami lived in the remote areas of Central Sweden, both before and after the royal edicts about the displacement of the Saami to the north in the 17th and 18th century (Svanberg 1999; G. Larsson 2019), something that has not been found until the last decade (Broadbent 2009, 2010; Zachrisson 2012; G. Larsson 2018, 2019; L-G. Larsson 2018; Nordin 2017). Traces of their handicraft have been found on farms and in local museums. Saami are also present in the church archival records. In both the north and south, it seems that some of the economic activities in the forest that we often find archaeological traces of, like burning tar and iron production, may have been performed by these remote people, the Forest Saami, and if surveyed, many Saami ancient monuments are present in these areas. However, they are often situated far from the agricultural areas in places that have seldom been investigated, so the Saami history in these areas has been overlooked until now.

Acknowledgements

The research project has been conducted within and financed by the project **Dammed** *(VR 2010–2012), and* **Rivers, Resistance, Resilience** *(VR 2013–2015) led by* **May-Britt Öhman***, and* **Katarina Pirak Sikku***'s project To give me my perspective. Traces of race biology in Sámi homes (VR 2017–2019), at the Centre for Gender Research at Uppsala University. Since 2018, it has been a part of Öhman's project* **Indigenous perspectives on climate change** *(Formas 2018–2021) at CEMFOR, Centre for Multidisciplinary Studies on Racism, Uppsala University.*

Abbreviations

Raä = Riksantikvarieämbetet. Swedish national database and topographic archive of cultural heritage sites.

Bibliography

Andersson, O. 2017. Landskap og kuturminner i Gierggebuodo i Divtasvuona suohkan/Tysfjord kommune. In A. F, Nielssen, K-Å. Aronsson, O. Andersen and S. Gælok (eds.): *Gielas/Kjölen. Arkeologi og historie i lule- og sörsamisk område*. Árran julevsáme guovdásj 2, pp. 41–63. Drag: Báhko.

Arnstberg, K-O. 1976. *Datering av knuttimrade hus i Sverige*. Nordiska Muséet: Stockholm.

Aronsson, K.-Å. 1991. *Forest Sámi Reindeer Herding AD 1−1800. An archaeological and palaeoecological study in northern Sweden*. Archaeology and Environment 10. University of Umeå: Umeå.

Aronsson, K-Å. 1995. *Samiska kulturmiljöer i Sverige. Studier till kulturmiljöprogram för Sverige*. Riksantikvarieämbetet, Stockholm 1995. Also available at https://www.diva-portal.org/smash/get/diva2:1291141/FULLTEXT01.pdf

Aronsson, K.-Å. 2000. Användningen av ängssyra (*Rumex Acetosa*) bland samerna. In I. Svanberg and H. Tunón (eds.): *Samisk etnobiologi. Människor, djur och växter i norr*. Studia ethnobiologica 10, pp. 253–258. Nora: Nya Doxa.

Aronsson, K.-Å. 2005. Arkeologiska och paleoekologiska undersökningar av renskötarboplatser. In O. Andersen (ed.): *Fra villreinjakt til reindrift*. Tjalaraddo. Árran julevsáme guovdás 1, pp. 109–123. Drag: Árran julevsáme guovdásj.

Aronsson, K.-Å. 2009a. Relations between man and reindeer – traces of reindeer herding. In P. Halinen, M. Lavento, and M. Suhonen (eds*.): Recent Perspective on Sámi archaeology in Fennoscandia and North-West Russia: Proceedings of the First International Conference on Sámi Archaeology, Rovaniemi, 19−22 October 2006*. ISKOS 17, pp. 17–24. Helsinki: Finnish Antiquarian Society.

Aronsson, K.-Å. 2009b. Saami societies and the siida: Reflections from an archaeological perspective. In T. Äikäs (ed.): *Máttut – Máddagat: The roots of Saami ethnicities, societies and spaces/places*. Publications of the Giellagas Institute 12, pp. 58–67. Oulu: University of Oulu.

Aronsson, K.-Å. andE. Ljungdahl. 2005. *Sakkunningutlåtande i Mål T 279-05 (Rätanmålet), Hovrätten för Nedre Norrland, odaterat. Samernas tidiga historia i Jämtland och Härjedalen (söder om Frostviken) med fokus på Tässåsens sameby - en tolkning av de arkeologiska spåren*. Excavation report. Available at http://www.oloft.com/arkeologi.pdf.

Aronsson, K.-Å. 2017. Májddum/Maitum – en samisk vinterby i skogslandet? In A. F. Nielssen, K-Å. Aronsson, O. Andersen, and S. Gælok (eds.): *Gielas/Kjølen. Arkeologi og historie i lule- og sörsamisk område*. Tjálarájddo. Árran julevsáme guovdásj 2, pp. 7–21. Drag: Báhko.

Awebro, K. 2000. Renmjölkningens betydelse förr. In I. Svanberg and H. Tunón (eds.): *Samisk etnobiologi. Människor, djur och växter i norr*. Studia ethnobiologica 10, pp. 179–188. Nora: Nya Doxa.

Bennerhag, C. 2009. *Norrbottniskt stål – redan för 2300 år sedan*. Norrbottens museum. Available at http://www.nll.se/webb/Kultur--och-utbildning/Norrbottens-museum/Uppdragsavdelningen/Arkeologi/Forskning/Samhalle-i-forandring-Jarnalder-i-Norrbottens-kustland/ [Visited on 19 Aug 2019].

Bennerhag, C. 2010. *Ugnen är funnen*. Norrbottens museum. Available at http://arkeologipnorrbottensmuseum.blogspot.com/2010/06/ugnen-ar-funnen.html. [Visited on 23 May 2020].

Bergman, I. 2018. Kulturarv, landskap och identitetsprocesser i norra Fennoskandien 500−1500 e.Kr. Slutrapport från ett forskningsprogram. *Riksbankens jubileumsfond* 15. Gothenburg: Makadam förlag.

Bergman, I, L. Östlund, and O. Zachrisson. 2004. The use of plants as regular food in ancient subarctic economies. A case study based on Sámi use of Scots pine innerbark. *Arctic Anthropology* 41(1): 1–13.

Broadbent, N. and B. Wennstedt Edvinger. 2009. Excavations at Hornslandsudde, Hälsingland, Sweden: Nine hundred years of sealing and new evidence of Sámi iron working. In P. Halinen, M. Lavento, and M. Suhonen (eds.): *Recent perspective on Sámi archaeology in Fennoscandia and North-West Russia. Proceedings of the First International Conference on Sámi Archaeology, Rovaniemi, 19−22 October 2006*. ISKOS 17, pp. 107–115. Helsinki: Finnish Antiquarian Society.

Broadbent, N. 2010. *Lapps and Labyrinths. Sámi Prehistory, Colonization, and Cultural Resilience*. Contributions to circumpolar anthropology 8. Washington D.C: Smithsonian Institution Scholarly Press.

Düben, G. von 1873. *Om Lappland och lapparne, företrädesvis de svenske. Ethnografiska studier*. Stockholm: Norstedt.

Ericson, P. 2003. Moderna renskötselns historia i Mellannorrland: del 1 1822−1872. *Samefolket* 3: 20–22.

Erixon, S. 1947. *Svensk byggnadskultur. Studier och skildringar belysande den svenska byggnadskonstens historia*. Stockholm: Aktiebolaget Bokverk.

Fjellström, P. 1986. *Samernas samhälle i tradition och nutid*. 2nd ed. Stockholm: Norstedt & Söners förlag.

Fjellström, P. 2000. Fjällkvannen (*Angelica archangelica*) i samisk tradition. In I. Svanberg and H. Tunón (eds.): *Samisk etnobiologi. Människor, djur och växter i norr*. Studia ethnobiologica 10, pp. 241–252. Nora: Nya Doxa.

Fornminnesinventeringen – nuläge och kompletteringsbehov. En riksöversikt. Riksantikvarieämbetet 1997. Stockholm. Also available at https://www.diva-portal.org/smash/get/diva2:1234856/FULLTEXT01.pdf

Hagerman, M. 2015. *Käraste Herman. Rasbiologen Herman Lundborgs gåta*. Stockholm: Norstedt.

Hedman, S. D. 2003. *Boplatser och offerplatser. Ekonomisk strategi och boplatsmönster bland skogssamer 700−1600 e. Kr*. Studia archaeologica Universitetis Upsaliensis 17. Umeå: Umeå University.

Hedman, S. D. 2007. Vardagens arkeologi i Norrbotten – en personlig betraktelse. In I. Svanberg. and H. Tunón (eds.): *Samisk etnobiologi. Människor, djur och växter i norr*. Studia ethnobiologica 10, pp. 193–207. Nora: Nya Doxa.

Hultblad, F. 1944. Några drag ur skogslapparnas äldre kulturgeografi. In J. Frödin, G. Enequist, and F. Hjulström (eds.): *Geografiska studier tillägnade John Frödin den 16 april 1944*. Geographica 15, pp. 102–118. Uppsala: Appelbergs.

Hultblad, F. 1968. *Overgång från nomadism till agrar bosättning i Jokkmokks socken*. Acta Lapponica 14. Stockholm: Almqvist & Wiksell.

Högström, P. 1980 [1747]. *Beskrifning* öfwer *Sweriges Lapmarker*. Norrländska skrifter 3. Umeå: Två förläggare.

Hörnberg, G, T. Josefsson, and L. Liedgren. 2014. Revealing the cultivation history of northernmost Sweden: Evidence from the pollen records. *The Holocene* 24(3): 318–326.

Hörnberg, G, T. Josefsson, I. Bergman, L. Liedgren, and L. Östlund. 2015. Indications of shifting cultivation west of the Lapland border: Multifaceted land use in northernmost Sweden since AD 800. *The Holocene* 25(6): 989–1001.

Isaksson, G. 1977. *Produktivkrafternas utveckling – bebyggelseutveckling. Tre socknar i Hälsingland under järnåldern*. Uppsats för C1 i arkeologi. Umeå University: Umeå.

Johansson, B. 1999. *Liggande hönor: en glömd fornlämning?* Umeå: Univ., Arkeologiska inst.

Johansson, C. 1951. Vildrensfångst. *Svenska Landsmål och Svenskt Folkliv* (1951): 1–36.

Johansson, C. 1989. *Mujto. Minnen från jägar- och fiskartiden och den gamla renkonstens dagar*. Folkminnen och folkliv 5. Umeå: Skrifter utgivna av Dialekt-, Ortnamns- och Folkminnesarkivet i Umeå.

Josefsson, T, G. Hörnberg, I. Bergman, and L. Liedgren. 2017. Cereal cultivation from the Iron Age to historical times: Evidence from inland and coastal settlements in northernmost Fennoscandia. *Vegetation History and Archaeobotany* 26(3): 259–276.

Karlsson, N. 2006. *Bosättning och resursutnyttjande. Miljöarkeologiska studier av boplatser med härdar från perioden 600−1900 e.Kr. inom skogssamiskt område*. Studia archaeologica Universitatis Umensis 21. Umeå: Umeå University

Klang, L. 1987. Den nya fornminnesinventeringen och den "nya" forntiden i Norrbottens kustkommuner. *Norrbotten* (1987): 32–58.

Korpijaakko-Labba, K. 1989. *Saamelaisten oikeusasemasta Ruotsi-Suomessa. Oikeushistoriallinen tutkimus Länsi-Pohjan Lapin maankäyttöoloista ja -oikeuksista ennen 1700-luvun puoliväliä*. University of Lapland publications in law 3. Helsinki: Lakimiesliiton Kustannus.

Korpijaakko-Labba, K. 1994. *Om samernas rättsliga ställning i Sverige-Finland. En rättshistorisk utredning av markanvändningsförhållanden och -rättigheter i Västerbottens lappmark före mitten av 1700-talet*. Helsingfors: Juristförbundets förlag.

Kuoljok, K. 2011. *Den samiska sitan och vinterbyarna. En utmaning*. Dissertations and documents in cultural anthropology 10. Uppsala: Uppsala University.

Kuoljok, K. 2017. Bårjåstit – Att segla. Samernas flyttningsmönster i en tid av kraftverksutbyggnaden längs Stuor Julevuädno/Stora Lule älv. In A. F. Nielssen, K-Å. Aronsson, O. Andersen, and S. Gælok (eds.): *Gielas/Kjølen. Arkeologi og historie i lule- og sörsamisk område*. Tjálarájddo. Árran julevsáme guovdásj 2, pp. 87–110. Drag: Báhko.

Laestadius, P. 1831. *Journal af Petrus Læstadius för första året af hans tjenstgöring såsom missionaire i Lappmarken*. Stockholm: Hæggström.

Læstadius, P. 1833. *Fortsättning af Journalen öfver missions-resor i Lappmarken innefattande åren 1828−1832*. Stockholm: Nordström.

Lang, T. 2016. Fornfynd 2000 år äldre än man trott. *Hela Hälsingland*. Newspaper article. Available at https://www.helahalsingland.se/artikel/lasartext-fornfynd-2-000-ar-aldre-an-man-trott.

Larsson, G. 1997. Bårren. Den samiska flotten. In B. Wännström and S. Krigsman (eds.): *Bottnisk kontakt VIII: Maritimhistorisk konferens. Piteå Museum 9−11 februari 1996. Huvudtema: Fiske*. Bottnisk kontakt 8, pp. 64–69. Piteå: Piteå Museum.

Larsson, G. 2006. An ethnoarchaeological approach to the problem of portages. In C. Westerdahl (ed.*): The Significance of Portages. Proceedings of the First International Conference on the Significance of Portages, 29th Sept−2nd Oct 2004 in Lyngdal, Vest-Agder, Norway*. BAR international series 1499, pp. 151–168. Oxford: Archaeopress.

Larsson, G. 2007. *Ship and Society. Maritime Ideology in Late Iron Age Sweden*. Aun 37. Uppsala: Uppsala University.

Larsson, G. 2014a. Protecting our memory from being blasted away: Archaeological supradisciplinary research retracing Sámi history in Gállok/Kallak. In J. Gärdebo, M-B. Öhman, and H. Maruyama (eds.): *Re: Mindings: Co-Constituting Indigenous, Academic, Artistic Knowledges*. Uppsala multiethnic papers 55, pp. 41–53. Uppsala: The Hugo Valentin Centre.

Larsson, G. 2014b. Samiska handelsfärder i när och fjärran, med sydda båtar. *Silbonah Sámesijdda*. Available at http://www.silbonah.se/11/74/3/samiska-handelsfarder-i-nar-och-fjarran-med-sydda-batar-gunilla-larsson/ [Visited 30 Nov 2018]

Larsson, G. 2015. *Gállokjaure. Lämningar efter ett samiskt kulturlandskap*. *Rapport över arkeologisk utredning. Rapport 2012:1*. Rimbo: Revita Archaeology and History.

Larsson, G. 2020/Forthcoming. Spår av samer i södra Hälsingland. In L-G. Larsson (ed.): *Samer i söder*. Uppsala: Acta. Kungl. Vetenskapssamhället.

Larsson, L-G. 2018. *Petrus Holmberger och sockenlapparnas språk*. Acta Bibliothecae R. Universitatis Upsaliensis 52. Uppsala: Uppsala University.

Lidman, H. 1937. Lappakojes. Några anteckningar kring lapparnas gamla boplats i Ovanåkers socken, där 4000-åriga kälkmedar, uråldriga eldhärdar och unika fiskefällor minna om en svunnen tids livsföring. Newspaper article, *Ljusnan* 14 May 1937: 5−6.

Liedgren, L. 1985. Gustaf Hallström's excavations at Onbacken, Hälsingland, 1923. In M. Backe (ed.): *In honorem, Evert Baudou*. Archaeology and Environment 4, pp. 339–352. Umeå: Umeå University.

Linné, C. 1975. *Carl Linnaeus Lappländska Resa år 1732*. Red. by M. von Platen and C-O. von Sydow. Stockholm: Wahlström & Widstrand.

Lundius, [Lundii, Lappi], N. 1983[1670s]. "Descriptio Lapponoiæ". In P. Fjellström, I. Ruong, and K.B Wiklund (eds.): *Berättelser om samerna i 1600-talets Sverige*. Kungl. Skytteanska samfundets handlingar 27, pp. 5–41. Umeå: Skytteanska samfundet.

Lundmark, L. 1998. *Så länge vi har marker. Samerna och staten under sexhundra år*. Stockholm: Rabén Prisma.

Lundmark, L. 2006. *Samernas skatteland i Norr- och Västerbotten under 300 år*. Rättshistoriska skrifter 8. Stockholm: Institutet för rättshistorisk forskning.

Lundmark, P. and F. Palmbo. 2011. *Kallakjaure. Särskild arkeologisk utredning, Kallakjaure. Inför planerad gruvetablering på fastigheterna Allmänningsskogen S:1; Björkholmen 1:2, 1:3, 2:5 och 5:1; Randijaure 1:18, 3:2, 4:2, 5:1, 7:1, 9:1, Jokkmokks socken och kommun, Lapplands landskap, Norrbottens län*. *Rapport 2011:22.* Excavation report. Luleå: Norrbottens museum. Available at https://norrbottensmuseum.se/media/452326/kallakjaure_utredning_149_2011_palmbo-och-lundmark.pdf.

Manker, E. 1947. *De svenska fjällapparna*. STFs handböcker om det svenska fjället 4. Stockholm: Svenska turistföreningens förlag.

Manker, E. 1957. *Lapparnas heliga ställen. Kultplatser och offerkult i belysning av Nordiska museets och Landsantikvarernas fältundersökningar*. Acta Lapponica 13. Stockholm: Gebers.

Manker, E. 1968. *Skogslapparna i Sverige*. Acta Lapponica 18. Stockholm: Almqvist & Wiksell.

Marklund, B. 2015. *Det milsvida skogsfolket. Skogssamernas samhälle i omvandling 1650–1800*. Skrifter från Centrum för samisk forskning 23. Umeå: Umeå University.

Miljökonsekvensbeskrivning Kallak Norra provbrytning. Slutrapport. Hifab 2012-12-26. Umeå. Also available at: https://www.jokkmokk.se/globalassets/kommun--samhalle/om-kommunen/filer/mineralprospektering/a3-kallak-miljokonsekvensbeskrivning-bilaga-2.pdf

Nielsen, A. R. 2017. "Sjøsamene i klemme". Konsekvenser av en ny statlig politikk overfor saamene på 15- og 1600-tallet. In A. F. Nielssen, K-Å. Aronsson, O. Andersen, and S. Gælok (eds.): *Gielas/Kjølen. Arkeologi og historie i lule- og sörsamisk område*. Tjálarájddo. Árran julevsáme guovdásj 2, pp. 64–86. Drag: Báhko.

Nordin, J. M. 2017. Samer i imperiets mitt: samiskt liv i det tidigmoderna Stockholm - en glömd historia. In A. Götlind and M. Lamberg (eds.): *Tillfälliga stockholmare: Människor och möten under 600 år*. Stockholmsmonografier 260, pp. 45–71. Stockholm: Stockholmia Förlag.

Pettersson, P. J. 1921. Lapparna i Hälsingland. *Helsingerunor* 4: 70–71.

Qvarnström, E. 2006. *"De tycka emellertid av gammal vana att det smakar gott, och tro dessutom att det är bra för hälsan". Samiskt växtutnyttjande från 1600-talet fram till 1950*. MA-thesis. Uppsala: Swedish University of Agricultural Sciences.

Ramqvist, P. H. 1987. *Samer och germaner i det förhistoriska Norrland*. Bebyggelsehistorisk tidskrift 14. Stockholm: Bebyggelsehistorisk Tidskrift.

Rankama, T. and P. Ukkonen. 2001. On the early history of the wild reindeer (*Rangifer tarandus L.*) in Finland. *Boreas* 30(2): 131–147.

Rheen, S. 1983 [1897] [1671]. En kortt Relation om Lapparnes Lefwarne och Sedher, wijdskiepellsser, sampt i många stycken grofwe wildfarellser. In P. Fjellström, I. Ruong. and K.B Wiklund (eds.): Berättelser om samerna i 1600-talets Sverige. *Kungl. Skytteanska samfundets handlingar* 27, pp. 1–68. Umeå: Skytteanska samfundet.

Ruong, I. 1982. *Samerna i historien och nutiden*. 4th ed. Aldus akademi. Stockholm: Bonnier fakta.

Schefferus, J. 1956. *Lappland*. Acta Lapponica 8. Stockholm: Geber.

Schmidt, J. W. 1992. *Resa genom Hälsingland och Härjedalen år 1799*. Translated by Anders Lööv. Tännäs: Luejie.

Schreber, J. C. D. 1762. Reise durch einige schwedische Bergwerke. In G. D Schreber (ed.): *Neue Sammlung verschiedener in die Cameralwissenschaften einschlagender Abhandlungen und Urkunden auch andrer Nachrichten*. Bd.1, pp. 42–129. Bützow & Wismar: Berger und Boedner.

Serning, I. 1960. Övre Norrlands järnålder. Skrifter utgivna av Vetenskapliga Biblioteket i Umeå 4. Umeå: Vetenskapliga biblioteket i Umeå.

Stiernman, A. A. von (ed.) 1733. *Alla riksdagars och mötens beslut 1521–1731*, vols. III. Stockholm: Joh. Henrich Werner.

Stiernman, A. A. von (ed.) 1753. *Samling af kongl. bref angående Sveriges rikes commerce, politie och ekonomie ifrån år 1523, in til närwarande tid*, vols. III. Stockholm: Kongl. Tryckeriet.

Sundström, H. 1983. *Ogräs i odlingshistoriens tjänst. Paleoekologiska forskningsmetoder och -resultat med exempel från norra Bottenviksområdet*. Bothnica 2. Luleå: Norrbottens Museum.

Svanberg, I. 1999. *Hästslaktare och korgmakare. Resursutnyttjande och livsstil bland sockenlappar*. Skrifter utgivna av Johan Nordlander-sällskapet 21. Umeå: Johan Nordlander-sällskapet.

Svanberg, I. and H. Tunón. (eds.) 2000a. *Ecological knowledge in the north. Studies in ethnobiology*. Studia ethnobiologica 9. Uppsala: Swedish Biodiversity Centre.

Svanberg, I. and H. Tunón. (eds.) 2000b. *Samisk etnobiologi. Människor, djur och växter i norr*. Studia ethnobiologica 10. Nora: Nya Doxa.

Swab, A. and C. M. Robsahm. 1940. *Journal under en resa genom Gästrikland, Hälsingland och Härjedalen till Röros kopparverk i Norge 1796*. Lund: Gleerup.

Tanner, V. 1929. *Antropogeografiska studier inom Petsamo-området. 1. Skolt-lapparna*. Fennia 49: 4. Helsingfors: Geographical Society of Finland.

Tervalampi, J. 2017. *Fredrik av Hessen. Hatad av samer*. Unpublished manuscript.

Ullenius, J. G. n.d. Handwritten notebooks, and *Handlingar om samer. J.G. Ullenius undersökning beträffande bebyggelse och ortsnamn i delar av Jokkmokks Skogslappsområde*. Unpublished archival sources (maps and text). Folders F1:1 and F 9:2. Luleå Individual Archives 125. Luleå: Norrbotten Museum Archive.

Ullenius, J. G. 1937. Något om skogslapparnas bovallar. *Norrbotten* 1937: 107–126.

ULMA 1954. *Berättelser om lappars uppträdande i svenska bygder*. Ethnographic survey. Unpublished archival source. Folder M 207. Uppsala: Uppsala Institute for Language and Folklore (ULMA).

Uppsala landsarkiv, letter of 13 Nov 1730. Unpublished archival source. Folder A1b, No 68 a. Landstingets handlingar. Kopparbergs länsstyrelses arkiv. Uppsala: Uppsala landsarkiv.

Wallerström, T. 1995. *Norrbotten, Sverige och Medeltiden. Problem kring makt och bosättning i europeisk periferi*. Lund studies in medieval archaeology 15. Stockholm: Almqvist & Wiksell.

Wennstedt Edvinger, B, and B. Ulfhielm. 2004. *Samer i Hälsingland: Inventering, studiecirklar, utställning. Hälsingland, 2000−2003*. Rapport. Länsmuseet i Gävleborgs län 2004:6. Gävle: Länsmuseet Gävleborg.

Wennstedt Edvinger, B. 2005. *Samer på Kåtudden i Järvsön? Datering av en eventuell kåtatomt i Söderala sn, Hälsingland*. Excavation report. Jämtarkeologi 15. Brunflo: Arkeologicentrum i Skandinavium. Available at http://www.arkeologicentrum.se/sites/default/files/rapporter/JA15_Katudden.pdf.

Westerdahl, C. 1985. Sewn boats of Sweden. In S. McGrail and E. Kenntley (eds.): *Sewn Plank Boats. Archaeological and Ethnographic Papers Based on Those Presented to a Conference at Greenwich in November, 1984*. BAR International Series 276, pp. 211–230. Oxford: B.A.R.

Westerdahl, C. 1987. *"Et sätt som liknar them uti theras öfriga lefnadsart." Om äldre samiskt båtbyggeri och samisk båthantering*. Skrifter utgivna av Johan Nordlander-sällskapet 11. Umeå: Johan Nordlander-sällskapet.

Westerdahl, C. (ed.) 2008. *Sydsamer. Från Bottenhavet till Atlanten. En historisk introduktion till samerna i Ångermanland och Åsele lappmark med angränsande delar av Jämtland och Norge*. Skärhamn: Båtdokgruppen.

Viklund, B-O. 2004. Samiska härdar i skogslandet. *Tidsspår* (2004): 198–218.

Viklund, B-O. 2008. Sökandet efter samiska härdar i skogsland och kustmiljö. Råd och dåd. In C. Westerdahl (ed.): *Sydsamer. Från Bottenhavet till Atlanten. En historisk introduktion till samerna i Ångermanland och Åsele lappmark med angränsande delar av Jämtland och Norge*, pp. 332–350. Skärhamn: Båtdokgruppen.

Vorren, Ö. 1979. Fallgravanlegg for elgfangst. *Ottar* 116−117: 70–78.

Zachrisson, I. 1988. Arkeologi och etnicitet. Samisk kultur i mellersta Sverige ca 1−1500 e. Kr. Samer och germaner i det förhistoriska Norrland. In P. H. Ramqvist (ed.): *Samer och germaner i det förhistoriska Norrland*. Bebyggelsehistorisk tidskrift 14, pp. 24–41. Uppsala: Swedish Science Press.

Zachrisson, I. (ed.) 1997. *Möten i Gränsland. Samer och Germaner i Mellanskandinavien*. Monographs 4. Stockholm: Statens Historiska Museum.

Zachrisson, I. 2012. Samer i syd i gången tid – till Uppland och Oslotrakten i söder. Ny forskning från Norge och Sverige. In H. Tunón, M. Frändén, C.-G. Ojala, and M. B. Öhman (eds.): *Uppsala mitt i Sápmi: rapport från ett symposium arrangerat av Föreningen för samiskrelaterad forskning i Uppsala, Upplandsmuseet 4−5 maj 2011*. CBM:s skriftserie 55, pp. 8–12. Uppsala: Centrum för biologisk mångfald.

Zachrisson, I. 2015. Samiska väskor på svenska örlogsskepp. Tusen år av kulturmöten. In S. V. Arbin, P. Nymoen, F. A. Hedlund Stylegar, M. Sylvester, A. Gutehall, and P. Skanse (eds.): *Tjop, Tjop! Vänbok till Christer Westerdahl med anledning av hans 70-årsdag den 13 november 2015*, pp. 219–232. Skärhamn: Båtdokgruppen.

Other archival sources

Jokkmokk Parish Church Archive, Lappland: Cathechetical lengths, Birth rolls, Wedding rolls, Death rolls.

Forsa Parish Church Archive, Hälsingland: Cathechetical lengths, Birth and baptism rolls, Wedding rolls, Death rolls.

Sockenlappar och finnkärringar, 1945. Ethnographic survey. Unpublished archival source. Folder NM SP 180. Stockholm: Nordic Museum.

Forsa Tingslags Häradsrätt court archive, Gävleborg County: Estate inventories.

Informants (agreed information)

Yngve Aronsson, Idenor, Hälsingland (local informant). 2018.

Torbjörn Brandt, Färila, Hälsingland (descendant of Saami in Medskog, Forsa Parish). 2015.

Elisabeth Ek, Björkholmen, Lappland (local informant, Tjäruborgares land). 2012.

Mats Frelin, Skärså, Hälsingland (owner of a former Saami house). 2015.

Karin Haglund, Hudiksvall, Hälsingland (local informant). 2015.

Roland Harnesk, Skällarim, Jokkmokk, Lappland (landowner). 2016.

Elisabet Hällström, Överkalix, Lappland (grandmother from Skällarim land). 2016.

Tor Lundberg Tuorda, Randijaure, Jokkmokk, Lappland (Saami landowner, Tjäruborgares land). 2012.

Erik Nilsson, Västeräng, Forsa, Hälsingland (landowner). 2015.

Nils Nilsson, Skällarim, Jokkmokk, Lappland (landowner on Skällarim land). 2015.

Christina Olmårs, Hovra, Färila, Hälsingland (local informant). 2015.

Erik Olsson, Trogsta, Forsa, Hälsingland (landowner). 2018.

Lars Pettersson, Björklinge, Uppland (descendant of Saami). 2015.

Mattias Pirak, Jokkmokk, Jåhkagasska Saami village, Jokkmokk, Lappland (reindeer herder Tjäruborgares land). 2012.

Jerry Tjärnlund, Björkholmen, Lappland (local informant, Tjäruborgares land)

Martha Trolin, Forsa, Hälsingland (local informant). 2018.

May-Britt Öhman, Skällarim, Jokkmokk (Saami descendant, landowner on Skällarim land). 2012, 2016.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

9

Common ground. Saami-Norse interactions in South Norway during the Late Iron Age and early medieval period

Hege Skalleberg Gjerde*

Abstract

Archaeological material said to confirm a Saami presence in South Norway during the Iron Age includes settlement sites, sacrificial sites, and stray finds as well as so-called 'hunting ground graves'. I argue that the diversity among hunting ground graves is too wide-ranging for them to be classified as one single phenomenon. Instead, I believe they indicate that Saami identity took many forms and presented itself in a range of different contexts and situations.

Iron Age Saami groups have often been interpreted as the antithesis of Norse Iron Age society, most commonly as hunters as opposed to sedentary farmers. Despite this dichotomy, several different sources presume that Saami people were an integrated part of Norse society. Archaeological material gives us the opportunity to study Saami and Norse interactions and networks. Through two different case studies, I demonstrate a complexity of expressions and a variety of perspectives within the material that represent Saami presence.

Key words: South Saami archaeology, ethnicity, Saami drum hammer, comb maker

9.1 Introduction

For quite some years, at least since the 1980s, there has been a growing interest within the field of archaeology to find, document, and understand South Saami prehistory. During this time, the attitude towards the assumption of a Saami presence in South Norway and mid-Sweden during the Iron Age has become more positive. The change in mindset is caused by extensive research on possible Saami archaeological material and the continuous challenging of established truths (Fredriksen 1983; Zachrisson 1987, 1992, 1997; Bergstøl 1997, 2008; Bergstøl and Reitan 2008; Amundsen 2011; Amundsen and Os 2015). The debate, however, is still focused on whether the archaeological material can be 'proven' to be Saami.

The archaeological material that confirms, or at least indicates, a Saami presence in South Norway includes settlement sites, possible sacred and sacrificial sites, and a few stray finds, as well as so-called hunting ground graves. In my doctoral thesis, I argue that the category of 'hunting ground graves' has become difficult to grasp and use in archaeological interpretations (Gjerde 2016). Nevertheless, the graves themselves are still interesting. I believe that they can help us understand some of the com-

* Independent researcher, hegesgjerde@gmail.com

plexity of Iron Age society. A range of sources provides convincing evidence that Saami culture and identity played a central role in Iron Age and medieval society throughout Scandinavia, including the South Norwegian areas. In this paper, I argue that Saami presence should be taken as a premise for archaeological reasoning and interpretation in further studies of South Norwegian material instead of having to prove the 'Saaminess' of every specific site, context, artefact, and so on. To this end, I explore Saami-Norse interactions taking place in the Iron Age and early medieval period by looking into some of the material connected to Saami culture in South Norway.

Two case studies are presented here. The first case deals with a specific artefact dated to the early medieval period, namely a drum hammer (*vietjere* in South Saami). The other case concerns a particular set of artefacts found in several of the Iron Age graves known as 'hunting ground graves', namely combs and comb making tools. Through these case studies, I reveal an ambiguity in the material, as well as a potentially rich and diverse understanding of it, that can open our stories about the past to include Saami culture and, even more importantly, a Saami past that goes beyond a stereotypical or fixed representation.

9.2 The archaeological material representing Saami presence

Though contested, the amount of archaeological material reflecting a Saami presence in South Norway in the past has increased during more than thirty years of research on this topic. It was primarily Inger Zachrisson who dared to challenge the ethnic affiliation of the individuals buried at Krankmårtenhögen and Vivallen in particular, but also of the inland Iron Age graves in general (Ambrosiani et al. 1984; Zachrisson 1987, 1992, 1997a). The discussion of the ethnic affiliation of these graves soon spread across the border to Norway. Here, the question of Iron Age graves that were disconnected from an agrarian settlement was well-known and widely discussed. Arne Skjølsvold (1969, 1980, 1981, 1983) had investigated such graves, previously known as 'mountain graves', but he refused to use ethnic labels (Skjølsvold 1980). Skjølsvold considered whether Eastern Norway could have been inhabited by hunter groups that were separate from farming communities. Later, Jostein Bergstøl (2008) has argued that the hunter groups that have left archaeological traces should be interpreted as Saami people.

Hunting ground graves have been interpreted as Saami graves due to their grave goods, morphology, and location, and also because they are seen as anomalies in the general Scandinavian Iron Age burial customs. Different researchers have emphasised different criteria and characteristics. Until my doctoral thesis (Gjerde 2016), no compilation had been made of the graves defined as hunting ground graves in Norway. In my attempt to do so, it became clear that the different criteria used in previous research, such as certain types of grave goods, a specific morphology, or a type of location, were not suitable for deducing which graves should be included in this category. Some graves and grave finds were frequently used as examples in the literature, but the content of the category remained rather unclear. Through a systematic study of the available information about the graves previously defined as hunting ground graves, including their morphology, grave goods, and other issues, it became clear that the diversity of these graves is too wide-ranging to classify them as representing one single phenomenon (Gjerde 2016).

The argument for a Saami population in South Norway during the Iron Age has suffered from a lack of proven settlement sites. The lack of settlement sites can be taken to prove that these areas were uninhabited and that the graves here may belong to the more centrally located Norse agrarian settlements. Nonetheless, a few settlement sites have been discussed in this context. There are three excavated turf hut foundations in Innerdalen in Kvikne, Hedmark county, which Gustafson (1988) compared to the Stállo foundations found further north along the border between Norway and

Sweden (see Storli 1991b, 1994; Mulk 1994; Liedgren and Bergman 2009; Hedman 2015). The similarities between the Innerdalen turf huts and the Stállo hut foundations consist mainly of the oval shape and the lowered inner floor. The Innerdalen huts are dated to the 15th and 16th centuries AD, which is the late Medieval period in Norway. They are therefore younger than the main period for most Stállo foundations, though some of these have been in use up until the 16th century, either continuously or with a separate later period of use disconnected from the Late Iron Age to early medieval period (Mulk 1994; Storli 1994). I do not claim that the Innerdalen settlement site is a Stállo site, as that is a very specific phenomenon known from a relatively restricted area. However, it is interesting that the Innerdalen remains have characteristics associated with Stállo hut remains, which also make them different from other types of settlement sites in South Norway in general (see also Aronsson in this volume).

In Valdres, Oppland county, there are two settlement sites with probable Saami affiliations. Close to the Grøv mountain farm in Vang municipality, there is a settlement site consisting of several hut foundations linked to iron production and hunting (Tveiten 2012). One hut foundation was round, but it was never excavated. Another was an oval-shaped turf hut foundation excavated in the 1940s and typologically dated to the Merovingian period (Helmen 1949). During the excavation, a Z-shaped scraper made of iron was found. This type of artefact is associated with eastern fur treatment and is hence related to Saami practices (Zachrisson 1997b; Bergstøl 2008: 93). The other settlement site in Valdres, excavated by the author in 2009, is situated by Lake Rensenn in Vestre Slidre municipality. It consists of four turf hut foundations in a row, of which especially the two to the south resemble round or oval Saami turf hut foundations. It is also interesting that the huts were placed in a row, as this is a very common feature in certain other Saami settlements. However, the two foundations to the north differ from the others in that they have an opening towards the lake and are shaped more like a horseshoe. The datings are a bit peculiar, as we found several layers on top of each other with first cooking pits, then a smithy, and then the dwelling phase. The dwelling phase of both of the round turf huts can be dated to the very early medieval period. This settlement phase is interpreted as a Saami settlement based on the type of house construction and the shape of the fireplace (Gjerde 2011, 2016: 135–138).

In Hallingdal, Buskerud county, there are several round or oval turf hut remains that have been interpreted as Saami settlements. I excavated two of the sites as part of my PhD, and both sites have datings to the Viking Age (AD 800–1000) and the 12th–13th centuries AD. The sites have not yet been definitely interpreted, but they represent round turf hut foundations in a mountain area where this kind of building technique was not common.

The latest addition to the settlement material is the Aursjøen settlement in the mountain area of Dovre in Lesja municipality. While surveying the drawdown zone at Lake Aursjøen in 2006, archaeologists found four big rectangular hearths in a row (Reitan 2006; Bergstøl and Reitan 2008). The hearths were all dated to a time span from the Merovingian period to the Viking Age (600–900 AD). This is a very characteristic feature of Saami settlement sites (see e.g. Hedman 2003, 2015; Hansen and Olsen 2014), and this settlement is considered to be the most convincing southernmost Saami settlement from the Viking Age.

Also a few stray finds with eastern traits and a possible eastern origin are included in the South Norwegian material related to a Saami presence. Zoomorphic pendants originally from Karelia, Finland, are found almost exclusively in Saami graves when encountered in North Norway (Storli 1991; Hansen and Olsen 2014). In South Norway, three such pendants have been found, but unfortunately their contexts are mainly unknown. Two of them were found somewhere in the municipalities of Lesja and Skjåk, which are located in the mountainous areas of South Norway. The third was found by metal detectorists in a crop field by the Oslo fjord. It is difficult to perform any kinds of conclusive analysis based on these objects, but they still add an interesting dimension to the South Norwegian material in terms of the presence of and interactions with Saami groups (Gjerde 2010, 2016: 174–178).

A certain kind of arrowhead has also been associated with Saami hunting, namely the Wegraeus type B (Wegraeus 1971), which is the main medieval type of arrowhead found at Saami sacrificial sites in Northern Sweden (Serning 1956, 1966; Zachrisson 1997b). In South Norway, 10 to 12 type B arrowheads have been found. The Z-shaped scrapers known from eastern fur treatment are included in this material as well. There are very few of these, only the one mentioned above from Valdres and another one, which was found right outside one of the so-called hunting ground graves by Lake Vesle Sølensjøen ('the small Sølen lake') in Rendalen (Bergstøl 2008: 93). Finally, there is one more artefact that shows a connection with Saami culture and presence in South-Eastern Norway. This is a Saami drum hammer dated to the 12th century AD. This exceptional object is my first case study for exploring the many associations and implications that one single such item may encompass.

9.3 Case 1: The drum hammer – *vietjere*

The drum hammer (Figure 9.1) from the Nordset farm in Rendalen, Hedmark county (Gjessing 1945), stands out in the South Norwegian material and has been referred to repeatedly during the last decades (Zachrisson 1997a; Bergstøl 2004a, 2004b, 2005, 2008; Hansen and Olsen 2014; Amundsen and Os 2015). However, we still do not fully understand this artefact and what it meant and to whom. Who owned it and used it? Have there been several different owners, and did they use it in the same way? Rather than trying to find a singular meaning for this object, I wish to highlight its inherent complexity, which opens it up to a wide range of associations.

Figure 9.1: The drum hammer from Nordset, Rendalen, Hedmark. (Photo: Museum of Cultural History, University of Oslo.)

Strictly speaking, the hammer is not a stray find, though very little information about it is available. It was found in a midden along with fire-cracked stones and a mix of artefacts from the medieval period up to historical times, signifying accumulation over quite a long time. The find context might give us a reason to view the drum hammer as litter, since it has been thrown away together with other worn-out things that eventually piled up as a midden. The other artefacts were five spinning wheels made of stone, a couple of iron arrowheads, one fragmentary iron spur, one pair of iron scissors, one iron chandelier, and a couple of cut bone fragments. Though Gutorm Gjessing (1945) interpreted this collection of artefacts as a sacrificial find, the very ordinary character of all the other objects except the hammer points to a less religious explanation.

The fact that this is a Saami object is not questioned (but see Haarstad 1992). Due to its well-known significance within traditional, pre-Christian Saami religion, the hammer has a rare unambiguous ethnic affiliation compared to other potentially Saami archaeological evidence in the area. Nevertheless, most other aspects of the artefact and its biography remain unclear. The radiocarbon dating of the hammer to the 12th century AD and the typological dating of the other artefacts in the assemblage to approximately the 15th century AD and later indicate that the hammer's period of use lasted at least a couple of hundred years. Could it have been taken away from a Saami shaman, a *nåejttie* (SaaS), because it represented a heathen religious practice, or was it worn out through generations of use in Saami religious rituals?

In any case, the hammer's combination of ornaments is the feature that has attracted the most attention. On one side, it has a panel with ornaments in the 'Ringerike style', named after a certain type of decoration on runestones from Ringerike, Buskerud county. On the other side, the drum hammer has a panel with plate interlace ornamentation. During the Iron Age, and especially during the Viking Age, plate interlace ornamentation was used in all Norse and Scandinavian areas on a wide range of different materials and objects. In the medieval period, plate interlace ornamentation became particular to Saami handicraft (Zachrisson 1997b). The reason for this change has not been properly investigated, but eventually plate interlace becomes a traditional and recognisable ornamentation type especially among the South Saami. Because of the hammer's dualistic appearance, with the two ornament styles as oppositional features, the drum hammer has been used as a symbol of Saami-Norse binary society.

Still, this is only half the picture. The hammer does not have only two panels with ornamentation, but four: two on each side of the hammer. On the side of the hammer where the Ringerike style can be seen to the right, the left panel has a carved geometrical pattern for which no parallels are known. On the opposite side, where the plate interlace pattern can be seen to the right, the left panel is blank with no carvings. This might indicate that the hammer was never completed. For example, the panel might have been kept vacant for future generations, or rather future situations. If so, the carvings may have been made as part of the rituals in which the hammer took part. Alternatively, the emptiness might have a symbolic meaning in itself. There is a small chance that this panel has been painted, though there are no visible traces of this. Further pigment residue analyses would be needed to establish whether this has been the case.

Based on the above, the hammer does not reflect a clear dichotomy between Saami and Norse identities, but a rather more complex situation. The expressions on the hammer can be seen as a kind of dialogue between different positions, roles, identities, or world views, which may have made it suitable for negotiation and mediation between people or groups. This coincides with the known function of this kind of object in Saami rituals. A Saami drum hammer was the tool that the *nåejttie* or shaman used for falling into a trance. Through the trance, they could travel between different worlds (life and death), communicate with the animals, travel through time, and so on. Thus, the *nåejttie* could transcend given categories, and people with transcending characteristics have been interpreted as shamans within the archaeological literature (Zachrisson 1997a; Price 2000; Solli 2002).

Taking this into account, we should also consider more thoroughly what the Ringerike style represents beyond signifying the Norse population in opposition to the Saami. According to the Norwegian art historian Signe Horn Fuglesang, the best stylistic parallels we know for the kind of Ringerike style found on the drum hammer is the Dynna runic stone and the wind vane from the Heggen church (Fuglesang 1980). Both are found in Christian contexts: the Dynna stone is the earliest Christian memorial in Norway, dated to c. AD 1040, and the Heggen church is naturally a Christian context. Both represent a late version of the style, though the drum hammer is even younger, as it dates to the 12th century. I suggest that the late Ringerike style might be associated with early Christianity in Norway.

The Dynna runic stone is an approximately three-meter-high triangular block of reddish sandstone with a runic inscription along one of the edges. The other sides are richly decorated with carved imagery that depicts the Epiphany, or the newborn Jesus and the three kings (Magi) who came to visit him. The historian of religion Gro Steinsland (2012) argues that the depictions on the Dynna stone represent a 'countermyth' to official Christianity, as it portrays a more common and everyday deity. God portrayed as a poor child contradicts the Germanic heroic stories from the Viking Age that were depicted on earlier runic memorial stones. It also contradicts the contemporary Christian image of God as a royal figure. I therefore suggest that the everyday religious stories and folklore of the Christian population at the time may not have been in such sharp opposition to the polytheistic Saami religion and ritual practice. The seemingly contradictory style elements and their symbolic meanings could be combined in the drum hammer without representing a profound dichotomy.

Keeping this in mind, I argue that the decoration on the drum hammer does not represent two incommensurable identities. Instead, it represents a conversation between different religious expressions and world views, showing that Saami rituals played an important role within such negotiations.

9.4 Case 2: The comb maker – a specialist in between

Saami Iron Age groups have often been interpreted as the antithesis of Norse Iron Age society, most commonly as hunters in opposition to sedentary farmers (Skjølsvold 1980; Bergstøl 2008). The so-called hunting ground graves are part of this hypothesis, and Martin Gollwitzer (2001), who constructed the category, emphasised the hunting equipment among the grave goods. However, a closer look at the grave goods shows that they do not consist solely of hunting equipment, but include a wide range of different tools and weapons. The variation seems to reflect a broader identity than simply that of a hunter, which opens opportunities for discussing a more diverse Saami past.

The Norwegian archaeologist Arne Emil Christensen has argued that the practices of reindeer hunting and comb making were often combined in the Iron Age (Christensen 1986). He argues that the comb maker's tool kit consisted of a saw, a rasp, and a small, trapezoid iron object probably used for carving or scraping (type R 416, Rygh 1885, see also Amundsen this volume). Furthermore, Christensen showed that this tool set could be found in several of what were then called 'mountain graves' and later included in the category of hunting ground graves. One particular grave from Eltdalen is his key example (Figure 9.2). This is an especially rich grave from the Migration Period containing weapons, tools, and animal bones, among other things. Among the tools we find what Christensen called the comb maker's tool kit, as well as a comb. The most striking thing about this find is that the comb and the saw match: the width of the saw's teeth is exactly the same as that of the gaps between the comb's teeth. He therefore argues that the saw in the grave is probably the very same saw that has been used to make the comb.

Figure 9.2: The tools from the Eltdalen grave. (Photo: Museum of Cultural History, University of Oslo.)

Saws are very rare artefacts in the Norwegian archaeological record, probably because they were very difficult to make. In the making of a bone or antler comb, every tooth must be sawn out individually, and the saw blade must be thin and even. Christensen argued that the making of combs has required specialists in all periods, from the Bronze Age to the medieval period. It is generally thought that comb makers in the medieval period were itinerant, that they travelled between towns providing their expertise (Ambrosiani 1981). In my opinion, this travelling practice is likely to have applied to comb making also in the Iron Age.

The comb maker is interesting as a historical agent but also figuratively, as an idea or even a symbol. This travelling specialist appears to me as a somewhat ambiguous, evasive, and indefinable figure. Zachrisson (2011) has stated that it is impossible for someone to have lived in a void between Saami and Germanic/Norse culture. The comb maker's task, however, is to make *voids*. For a comb to become a comb, it needs gaps. They are the structuring element that creates and forms the teeth: no gaps, no teeth, no comb. It is by making the voids, the emptiness between the teeth, that the comb finds its form. I find this thought inspiring in the discussion of the ethnic affiliation of the so-called hunting ground graves. Researchers before me have suggested that there could have been people in Scandinavia in the Iron and Middle Ages identifying as between Saami and Norse, or even both Saami and Norse (Olsen 2004: 210). The comb maker might provide content to this void in between by being an agent who profits from an open and inclusive structure.

Comb makers may also have had a very symbolic role. They may have been people who actually travelled physically between locations, but also among or back and forth between different groups. Like the *nåejttie* or shaman, the comb maker could be associated with transcending characteristics. Even the liminal location of the graves in which the tool kits are found may imply a certain role of outsider and crossover for the comb makers both before and after their death. The graves are located outside and far away from any known settlement sites, but such locations can also be seen as communication routes connecting places and people.

9.5 Final remarks

The archaeological material said to confirm a Saami presence in South Norway during the Iron Age and early medieval period is limited, but increasing, and it covers a range of different types of structures and artefacts. I have chosen to accentuate the two cases above to show the potential of some of the material to go beyond questions of ethnicity. Ethnic ascription is never straightforward, and even an unquestionably Saami artefact such as the drum hammer can reveal stories much more complex than a dichotomy between Saami and Norse identity. Its indisputable Saami association facilitates such discussions about its meaning and associations beyond that of ethnicity.

The comb maker makes for an image of the undefinable. It is not certain whether comb making was a specific profession in the Iron Age, but the idea of someone who transcends the regular categories of identities is crucial for a fresh perspective. All artefacts can tell more than one story, and sometimes these stories can seem contradictory. Nevertheless, we need to accept these contradictions as enriching our understanding of the past rather than force ambiguous objects into singular, simplistic interpretations. Our understanding of the past gets richer with each additional story we find.

I argue that we should include South Saami prehistory in the stories we tell of Norse Iron Age and vice versa: we should also include the Norse Iron Age in the stories we tell of South Saami prehistory, as it makes no sense to separate them. By this I do not mean that we cannot distinguish between Saami and Norse traditions, objects, rituals, and so on, but rather that we cannot treat them as independent of each other. We should recognise that Norse Iron Age material is part of South Saami prehistory,

even though the archaeological record may not reflect the typical characteristics of South Saami culture today. Saami identities, as all identities, are constantly evolving, and what we recognise as, for example, South Saami culture today, cannot automatically be traced back in time. ‘The ethnographic curse’, as it has been called, illustrates how Saami culture has been perceived as static and underdeveloped because we let the ethnographic sources dictate what Saami culture really looks like (Olsen 2004; Wobst 2005; Fossum 2006). Since cultural expressions evolve constantly, we should rather try to understand Iron Age society as a time when both the Norse and the Saami identities included other expressions than those familiar to us today.

Bibliography

Ambrosiani, K. 1981. *Viking age combs, comb making and comb makers. In the light of finds from Birka and Ribe*. PhD thesis. Stockholm: University of Stockholm.

Ambrosiani, B., E. Iregren, P. Lahtiperä, L. Werdelin, and I. Zachrisson. 1984. *Gravfält i fångstmarken. Undersökningarna av gravfälten på Smalnäset och Krankmårtenhögen, Härjedalen*. Stockholm: Riksantikvarieämbetet.

Amundsen, H. R. 2011. *Mot de store kulturtradisjonene. Endringsprosesser fra tidligneolitikum til førromerske jernalder mellom Mjøsa og Femunden*. PhD thesis. Oslo: University of Oslo.

Amundsen, H. R. and K. Os. 2015. Ruseformete massefangstanlegg for villrein i nordre Hedmark – samiske eller norrøne tradisjoner? *Heimen* 1(1): 41–53.

Bergstøl, J. 1997. *Fangstfolk og bønder i Østerdalen. Rapport fra Rødsmoprosjektets delprosjekt ‘marginal bosetning’*. Oslo: Universitetets Oldsaksamling.

Bergstøl, J. 2004a. Creoles in Iron Age Norway? *Archaeological Review from Cambridge* 19(2): 7–24.

Bergstøl, J. 2004b. Fangstfolk eller samer i Østerdalen? In M. Krogh and K. Schanche (eds.): *Samisk forhistorie. Rapport fra konferanse i Lakselv 5.–6. september 2002*, pp. 62–80. Varangerbotn: Varanger Samiske Museum.

Bergstøl, J. 2005. Etnisitet og kulturmøter med utgangspunkt i materiale fra Østerdalen: Status og problemstillinger – jernalder og middelalder. In K. Stene, T. Amundsen, O. Risbøl, and K. Skare (eds.): *‘Utmarkens grøde’. Mellom registrering og utgravning i Gråfjellområdet, Østerdalen*, pp. 107–123. Oslo: The Museum of Cultural History.

Bergstøl, J. 2008. *Samer i Østerdalen? En studie av etnisitet i jernalderen og middelaleren i det nordøstre Hedmark*. PhD thesis. Oslo: University of Oslo.

Bergstøl, J. and G. Reitan. 2008. Samer på Dovrefjell i vikingtiden – et bidrag til debatten omkring samenes sørgrense i forhistorisk tid. *Historisk tidsskrift* 1: 9–27.

Christensen, A. E. 1983. Reinjeger og kammaker, en forhistorisk yrkeskombinasjon? *Viking* XLIX: 113–133.

Fossum, B. 2006. *Förfädernas land. En arkeologisk studie av rituella lämningar i Sápmi, 200 f.Kr.–1600 e.Kr*. PhD thesis. Umeå: Umeå University.

Fredriksen, G.1983. Samer i Trysil? *Nicolay Arkeologisk Tidsskrift* 41: 29–36.

Fuglesang, S. H. 1980. S*ome Aspects of the Ringerike Style. A phase of 11th Century Scandinavian art*. Odense: Odense University Press.

Gjerde, H. S. 2010. Tilfeldig? Neppe. Finsk-ugriske smykker i Sør-Norge. *Viking* LXXIII: 49–60.

Gjerde, H. S. 2011. *Rapport arkeologisk utgravning. Gammetufter, smie, kokegroper. Vestre Slidre Statsallmenning, 84/1 Vestre Slidre, Oppland*. Oslo: The Museum of Cultural History.

Gjerde, H. S. 2016. *Sørsamisk eller førsamisk? Arkeologi og sørsamisk forhistorie i Sør-Norge – en kildekritisk analyse*. PhD thesis. Oslo: University of Oslo.

Gjessing, G. 1945. To hamrer til samiske runebommer. In K. Nielsen (ed.): *Festskrift til Konrad Nielsen på 70-årsdagen*, pp. 99–115. Oslo: Brøgger.

Gollwitzer, M. 2001. *Besiedlung und wirtschaft der zentralskandinavischen Gebirgsregion während der Eisenzeit. Forschungsgeschichte, Fundüberlieferung, Siedlungsgeschichte*. Bonn: Habelt.

Gustafson, L. 1988. Hvem drev elgfangst i Innerdalen i seinmiddelalderen? In: *Nordkalotten i en skiftande värld – kulturer utan gränser och stater över gränser. Tredje nordiska symposiet om Nordskandinaviens historia och kultur,* pp. 39–58. Rovaniemi: Pohjois-Suomen Historiallinen Yhdistys.

Haarstad, K. 1992. Runebommehammeren fra Rendalen. *Spor* 2: 44–48.

Hansen, L. I. and B. Olsen. 2014. *Hunters in transition. An outline of Early Sámi History*. Leiden: Brill.

Hedman, S. D. 2003. *Boplatser och offerplatse. Ekonomisk strategi och boplatsmönster bland skogssamer 700–1600 AD*. PhD thesis. Umeå: Umeå University.

2015. Stállotomter från kusten och upp till högfjällen, vad berättar de? In B. Evjen and M. Myrvoll (eds.): *Från kust til kyst Áhpegáttest áhpegáddáj Møter, miljø og migrasjon i pitesamisk område*, pp. 29–50. Stamsund: Orkana Akademisk.

Helmen, A. 1949. Forhistoriske hustufter ved Grøv seter, Vang i Valdres. *Naturen* 73: 341–352.

Liedgren, L. and I. Bergman. 2009. Aspects of the construction of prehistoric stállo-foundations and stállo-buildings. *Acta Borealia* 26(1): 3–26.

Mulk, I. M. 1994. *Sirkas. Ett samiskt fångstsamhälle i förändring Kr.f.–1600 e.Kr.* Umeå: Umeå University.

Olsen, B. 2004. Hva er samisk forhistorie? In M. Krogh and K. Schanche (eds.): *Samisk forhistorie. Rapport fra konferanse i Lakselv 5.–6. september 2002*, pp. 20–30. Varangerbotn: Varanger Samiske Museum.

Price, N. S. 2000. Drum-time and Viking Age: Sámi-Norse identities in Early Medieval Scandinavia. In M. Appelt, J. Berglund and H. C. Gulløv (eds.): *Identities and Cultural Contacts in the Arctic. Proceedings from a Conference at the Danish National Museum, Copenhagen, November 30 to December 2, 1999*, pp. 12–27. Copenhagen: Danish National Museum & Danish Polar Center.

Reitan, G. 2006. *Rapport arkeologisk utgravning. Boplassfunn/ildsted. Dalsida statsalmenning (Aursjøen) 156/1 Lesja, Oppland*. Oslo: The Museum of Cultural History.

Serning, I. 1956. *Lapska offerplatsfynd från järnålder och medeltid i de svenska lappmarkerna*. Stockholm: Hugo Geber.

Serning, I. 1966. *Dalarnas Järnålder*. Stockholm: Kunglige Vitterhets Historie och Antikvitets Akademien.

Skjølsvold, A. 1969. En fangstmanns grav i Trysil-fjellene. *Viking* XXXIII: 139–199.

Skjølsvold, A. 1980. Refleksjoner omkring jernaldersgravene i sydnorske fjellstrøk. *Viking* XLIII: 140–160.

Skjølsvold, A. 1981. En tidlig romertids grav i Rendalsfjellene og noen tanker omkring den eldste jernaldersbosetning i sydnorske innlandsstrøk. *Viking* XLIV: 5–32.

Skjølsvold, A. 1983. Et gravfelt i Rondane med keltertids tradisjoner. *Viking* XLVII: 107–117.

Solli, B. 2002. *Seid. Myter, sjamanisme og kjønn i vikingenes tid*. Oslo: Pax.

Steinsland, G. 2012. *Mytene som skapte Norge. Myter og makt fra vikingtid til middelalder*. Oslo: Pax.

Storli, I. 1991a. De østlige smykkene fra vikingtid og tidlig middelalder. *Viking* LIV: 89–104.

Storli, I. 1991b. *"Stallo"-boplassene. Et tolkningsforslag basert på undersøkelser i Lønsdalen, Saltfjellet.* Tromsø: University of Tromsø.

Storli, I. 1994. *"Stallo"-boplassene. Spor etter de første fjellsamer?* Oslo: Novus

Tveiten, O. 2012. *Ein arkeologisk analyse av jarnvinna kring Langfjella i yngre jarnalder og mellomalder*. PhD thesis. Bergen: University of Bergen.

Wegraeus, E. 1971. *Vikingatida pilspetsar i Sverige. En förbisedd föremålsgrupp*. Uppsala: Uppsala University.

Wobst, H. M. 2005. Power to the (indigenous) past and present! Or: The theory and method behind archaeological theory and method. In C. Smith and H. M. Wobst (eds.): *Indigenous Archaeologies. Decolonizing Theory and Practice*, pp. 17–32. Florence: Taylor and Francis.

Zachrisson, I. 1987. Arkeologi och etnicitet. Samisk kultur i mellersta Sverige ca 1–1500 e. Kr. *Bebyggelsehistorisk tidsskrift* 14: 24–41.

Zachrisson, I. 1992. Saami prehistory in the South Saami area. In R. Kvist (ed.) *Readings in Saami History, Culture and Language, III*, pp. 9–24. Umeå: University of Umeå.

Zachrisson, I. 1997a. *Möten i Gränsland. Samer och germaner i Mellanskandinavien*. Stockholm: Statens Historiska Museum.

Zachrisson, I. 1997b. Vaför samiskt? In I. Zachrisson (ed.) *Möten i gränsland. Samer och germaner i Mellanskandinavien*, pp. 189–220. Stockholm: Statens Historiska Museum.

Zachrisson, I. 2011. Comments on Camilla Olofsson: Making new antlers: Depositions of animal skulls and antlers as a message of regeneration in South Sámi grave context. *Norwegian Archaeological Review* 44(2): 186–209.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

10
Mines and missions: Early modern Swedish colonialism in Sápmi and its legacies today

Carl-Gösta Ojala*

Abstract

This paper discusses issues relating to the contested colonial history and heritage in Sápmi, focusing on the situation in Sweden, as well as some of the challenges – but also possibilities – that archaeologists and other scholars are facing when dealing with this field of tension. In particular, the discussion focuses on early modern mining and collecting of Saami material objects in Sápmi, the collecting of Saami human remains in the 19th and early 20th centuries and current debates on repatriation and reburial. The paper takes its starting point in two interrelated research projects, funded by the Swedish Research Council, *A Colonial Arena*, dealing with early modern extractive industries in Sápmi, and *Collecting Sápmi,* dealing with early modern collecting of Saami material culture and its legacies today. In the paper it is argued that Swedish colonialism in Sápmi needs to be explored more in-depth, and that archaeologists need to deal with issues of Saami self-determination in heritage management and recognize and consider cultural rights movements and decolonization processes in Sápmi.

Keywords: Colonialism, extractive industries, collecting, Indigenous land and cultural rights, Sápmi

10.1 Introduction

Swedish colonialism in Sápmi[1] is a contested issue, which has been at the center of many debates in recent years. When discussing Saami pasts, and scholarship on Saami pasts, colonial histories and relations in and around Sápmi are of fundamental importance. Much of our knowledge about Saami pasts have been, and still are, filtered through a colonial raster. Colonial histories in Sápmi are multidimensional, complex, contested and entangled with different, conflicting historical narratives and ideas about land and people in the North, which affect also archaeological research and interpretations in Sápmi.

The discussion in this paper takes its starting point in research that I have been involved with during recent years, in particular the two interrelated research projects, *A Colonial Arena* and *Collecting Sápmi*, funded by the Swedish Research Council.[2] The two research projects deal with different aspects of early modern Swedish colonialism in Sápmi, and the consequences and importance of the colonial histories and relations today.

* Department of Archaeology and Ancient History, Uppsala University, carl-gosta.ojala@arkeologi.uu.se

1. In this paper, I use the notion of Sápmi as the present-day traditional core area of the Sámi population which stretches across the state boundaries between northern Norway, Sweden, Finland and the Kola Peninsula in Russia. However, Sápmi is a complex and multilayered notion with many different meanings, and the borders of Sápmi have been challenged and contested in many ways (see e.g. Ojala 2009).

2. In both of the research projects discussed in this paper, *A Colonial Arena* and *Collecting Sápmi*, I have worked together with Jonas Monié Nordin, National Historical Museums in Stockholm. In the *Collecting Sápmi* project, several other researchers and museum professionals from Sweden, Norway and Finland have also been involved.

I will discuss some issues relating to the contested colonial history and heritage in Sápmi, which have been in focus in the two projects, as well as some of the challenges – and possibilities – that archaeologists and other scholars are facing when dealing with this field of tension. In particular, I will focus on early modern mining and collecting of Saami material objects in Sápmi. I will also, although this theme was not part of the two research projects, discuss the collecting of Saami human remains in the 19th and early 20th centuries and current debates on repatriation and reburial, which can be seen as part of the general history of colonial collecting and extractivism in Sápmi, and which point to the need for archaeologists to critically examine colonial histories and relations.

The paper focuses primarily on the section of Sápmi that is today part of Sweden, with some comparisons with Norway and Finland. However, it is important to keep in mind that the present-day state boundaries are most often not relevant for earlier Saami history. Still, the state boundaries have had a profound impact on the understanding of Saami past and present and have in many ways divided the Saami lands and populations. The state boundaries – in essence colonial constructions – are therefore important elements in narratives of Saami history, heritage and decolonization.

I will argue that there is a need to examine Swedish colonialism in Sápmi more in-depth, to view Swedish colonialism in a larger, international perspective, not separated from European colonial ideologies and practices in general, and also to explore the connections between early modern colonialism in Sápmi and Swedish participation in colonial processes in other parts of the world. Furthermore, I will argue that archaeologists need to recognize and seriously consider Saami claims for greater self-determination in heritage management and debates on cultural rights and decolonization in Sápmi.

In the following, I will first discuss some experiences from my earlier research within the two interrelated research projects, *A Colonial Arena* and *Collecting Sápmi.* Thereafter, I will discuss some central issues, raised in the projects, connected with the understanding of colonial histories and relations, and the struggles for Saami land and cultural rights, self-determination and decolonization in Sápmi.

10.2 Early modern colonial exploitation and extractive industries in Sápmi

The first of the projects, which is called *A Colonial Arena: Landscape, People and Globalization in Inland Northern Sweden in the Early Modern Period*, funded by the Swedish Research Council (2014–2017), dealt with early modern colonial histories and relations in Sápmi, from a historical archaeological perspective. One central focus of the project was on the early modern exploitation of natural resources, and the establishment and development of metal extractive industries, in the Saami areas in present-day northern Sweden in the 17th century.

In the project, we have explored three main case studies. One of the cases has concerned the copper and iron industries in the Torne River Valley in the 17th century, with sites such as Kengis/Köngänen/Geavŋŋis (outside of Pajala/Bájil), Masugnsbyn, Svappavaara/Vaskivuori/Veaikevárri, and Leppäkoski and Pahtavaara (nearby Jukkasjärvi/Čohkkiras). Iron ore was discovered in Masugnsbyn in the 1640s; and in the 1650s, mining of copper ore was started in Svappavaara. From the 1640s, an industrial enterprise and industrial landscape developed in the Torne River Valley, centering on the copper and iron works in Kengis (Nordin and Ojala 2017; Ojala and Nordin 2019). This was the beginning of the mining history of the region, leading up to the later, large-scale mines in Kiruna/Giron and Malmberget (Hansson 2015). In collaboration with Åsa Lindgren from Norrbotten County Museum, we have surveyed and documented 17th-century mining and works sites in the Torne River Valley (Lindgren et al. 2020; Nordin & Ojala 2020). There are many well-preserved remains, which have been little, or not at all, studied archaeologically, and which are in many cases not very

well protected. For instance, in Svappavaara, the archaeological remains of the 17th-century mining village, which is located in the middle of the current mining area, as well as the copper works in the present-day Svappavaara community, are threatened by present-day exploitation.

We have also explored the historical contexts and importance of the 17th-century silver mine at Nasafjäll/Násavárre (Bromé 1923) and the silver works at Silbojokk/Silbbajåhkå (Awebro et al. 1989; Nordin 2012, 2015), and at Kvikkjokk/Huhttán (Awebro 1983; Bäärnhielm 1976; Nurmi 2019). Silver ore was first discovered in 1634 in Nasafjäll, high up in the mountains by the border with Norway, which led to high hopes of great future riches for the Swedish crown and became the start of the exploitation of mineral resources in Sápmi, which is still ongoing. Local Saami people were, during certain periods, forced to work for the mine, especially with transportation, and there exist many histories and memories of hardships and exploitation of the Saami populations, against which Saami groups also protested, e.g. by submitting written complaints to the authorities or by evading the forced labor (see e.g. Awebro 1983: 183–230; Bromé 1923: 152–169).

A third case study dealt with the early modern church and market places, which were established by the Swedish state and the Swedish church in the inland Saami areas from the beginning of the 17th century. The church and market places that were established in the early 17th century in the inland Saami areas, such as Lycksele/Lïkssjuo, Arvidsjaur/Árviesjávrrie, Jokkmokk/Jåhkåmåhkke, Jukkasjärvi/Čohkkiras and Enontekiö/Markkina/Márkan, can be seen as nodes or central points in the colonial landscapes, where trade, taxation, legal and religious affairs as well as social interactions were concentrated during certain periods of the year – when the local Saami populations had to be present – and which were important spaces in the process of tying the inland Saami areas and populations closer to the Swedish crown and church (see Bergling 1964; Ojala and Nordin Forthcoming; Wallerström 2017).

We have studied these sites – but also the mining and works sites – as colonial contact zones or 'colonial arenas', where different groups of people interacted, and where different kinds of relationships, identities, material cultures and power relations were played out, negotiated and transformed (Nordin and Ojala 2017, 2020; Ojala and Nordin 2019; Ojala and Nordin Forthcoming; cf. Lindgren et al. 2020). However, it is important to keep in mind that these sites were also part of Indigenous Saami landscapes, with roots stretching far back in time. In our view, there is a need for much more research on the early modern Saami communities and their transformations during this period of great external and internal pressures. There are still many blank spots in the knowledge of Indigenous landscapes in Sápmi and the Torne River Valley area during the 17th century, and more archaeological research is needed.

Some of our central questions have dealt with notions of Swedish colonialism in Sápmi, and the roles and positions of the local Saami – and in the Torne River Valley area, also Finnish or Tornedalian – communities in the colonial processes, especially concerning Saami agency and involvement in the extractive industries, but also resistance and protest. We have also discussed the early modern development of extractive industries in Sápmi and the Torne River Valley in a larger international perspective, as being involved in international networks of trade, capital, people and ideas in the 17th century. Here, we have focused especially on the Dutch-Swedish industrialists, the brothers Abraham and Jakob Momma-Reenstierna, who took over and developed the copper and iron industries in the Torne River Valley in the 17th century, and their involvement in different international networks (Nordin and Ojala 2017).

10.4 Early modern collecting of Saami material culture

The second project, which is in many ways closely connected with the *Colonial Arena* project, is called *Collecting Sápmi: Early Modern Globalization of Sámi Material Culture, and Sámi Cultural Heritage Today*. This is a larger project, funded by the Swedish Research Council (2014–2018), with participants from universities and museums in Sweden, Norway and Finland.

The aim of the project has been to examine the history of early modern collecting of Saami material culture, and early descriptions of Saami culture, from the late 16th century until the early 18th century. In the project, we have aimed to study early modern international networks of scholars and collectors who were interested in Saami material culture, and to investigate how, where and why the collecting of Saami objects was conducted, as well as to follow the movement of the objects between different collections and collectors in the Nordic countries and other European countries.

Furthermore, the aim of the project was to study the importance of the early modern collecting and the collected objects in today's society, including how some objects in recent times have returned to the Saami areas, and have been 're-activated' in Saami communities, as part of repatriation and revitalization processes. Thus, in the project, a number of critical issues have been raised concerning colonial histories and relations in Sápmi, the motivations and ideologies of collecting, as well as the right to Saami cultural heritage.

The project consisted of a number of case studies. It included, as a central part, a survey of museum collections in the Nordic countries and in other European countries with early modern Saami objects, from before the 1800s – trying to find as much information as possible about these early collections (Harlin et al. Forthcoming; cf. also Harlin 2017). One very important aspect is to make the information about these early collections of Saami objects available to Saami communities, although there are also ethical issues to consider when making this kind of information public, especially concerning sacred and sensitive objects. Most of the oldest Saami objects are kept in museums outside of Sápmi, and information about these collections are generally difficult to access, as earlier overviews to a large extent are lacking.

One of the most important categories of early modern Saami objects are the sacred Saami drums, which were important objects in the Indigenous Saami religion in the 17th and 18th centuries (Christoffersson 2010; Manker 1938, 1950). Many Saami drums were confiscated by force by the Swedish crown and church, for instance during court sessions in Kemi Lappmark in 1671 and Åsele/Sjeltie in 1725, as part of the mission work and the campaigns against what was perceived as non-Christian religious beliefs and practices (Harlin et al. Forthcoming; Kroik 2007; Nordin and Ojala 2018). Drums were also confiscated by missionaries and clergymen in Norway. Many drums, as well as Saami sacred sites and sacred *sieidi* (sacred stone or wooden object) were also destroyed by the authorities and their allies. On the one hand, the drums were seen as instruments for Saami sorcery and idolatry and the use of the drums was prohibited with threats of serious punishment. On the other hand, the Saami drums attracted much curiosity and were strongly coveted by collectors and scholars around Europe, as exotic and magical objects. As a result, some of the drums ended up in collections around Europe, where some of them still exist today (Duoddaris 2000; Edbom 2005; Harlin 2008; Harlin et al. Forthcoming; Snickare 2014).

We have also been interested in the academic networks at Uppsala University in the 17th century, and their importance for the construction of ideas on Saami culture and history. One central person in the history of constructing notions of Saaminess was Johannes Schefferus (1621–1679), professor in Uppsala. Schefferus was the author of *Lapponia*, the first major monograph on the Saami, which was first published in 1673 and which had profound impact on later views on Saami culture and religion (Schefferus 1956 [1673]). One of our case studies has aimed to explore the networks of Schefferus and *Lapponia* (Andersson Burnett 2019; Nordin and Ojala 2019). We are interested in his Saami and

non-Saami informants – and how *Lapponia* was built on networks consisting of many different actors. Schefferus also built his own library and museum building in Uppsala, where he kept a collection of drums, *sieidi* stones and other Saami objects (Nordin and Ojala 2015, 2018). The building is still standing in central Uppsala, close to the Cathedral. He also wrote about mineral deposits in Sápmi in *Lapponia* and corresponded with people involved in the extractive industries in Sápmi, exemplifying the interconnections between the different agents in the colonial processes.

As mentioned above, another important part of the project is to study the meaning and importance of the early modern Saami objects today, for instance in different cultural revitalization processes, and to follow these objects in current debates on cultural heritage. Here, the debates on repatriation of Saami cultural heritage, and greater Saami self-determination concerning heritage issues, are central (Harlin 2017, 2019a, 2019b; Nordin and Ojala 2018; Ojala 2017, 2018).

As part of the project, we have made a special study of two collections in Sweden with early modern Saami objects, the Royal Armory in Stockholm and the Skokloster Castle by Lake Mälaren. In collaboration with Sunna Kuoljok, ethnologist from Ájtte – the Swedish Mountain and Sámi Museum, and the Saami crafts persons and tradition bearers Lisbeth Kielatis and Per-Ola Utsi, the Saami objects in these collections were studied in detail (Kuoljok 2020).

The objects at the Royal Armory are part of a so-called Saami equipage – with a sledge, a life-size mannequin with Saami clothing, a stuffed reindeer with equipment, a drum and other objects – which was given as a gift to the Swedish king Karl XI in the 1690s from the County Governor of Västerbotten Gustaf Douglas (Nordin and Ojala 2018). The Saami objects at Skokloster Castle are known from inventories to belong to a collection that existed in the early 18th century. The objects at the Royal Armory and Skokloster Castle thus constitute some of the oldest surviving collected Saami objects in Sweden. The special study aimed to contribute to an exchange of knowledge between museum professionals and Saami tradition bearers and crafts people and more generally to a revitalization of old museum collections and knowledge about older Saami handicraft and traditions. The knowledge of Lisbeth Kielatis and Per-Ola Utsi contributed greatly to the understanding of these early modern objects, concerning e.g. their techniques, materials, patterns and social and cultural contexts. At the same time, information about these early Saami objects could be returned to Saami communities.

10.5 Contested colonial history and heritage in Sápmi

The two research projects, briefly discussed above, are situated in a field of tension between past and present, in which issues of colonialism are central. The development of extractive industries and the collecting of Saami material culture must be seen as part of a larger context of colonial and missionary policies and practices in the Saami areas in the 17th and 18th centuries: colonial policies and practices that affected, involved and engaged lands, as well as the bodies and minds of the people living in Sápmi – and which have had serious, long-lasting impact in Sápmi and Sweden.

In the following, I will raise some of the current debates and contested issues connected with the understanding of colonial histories and colonial exploitation and collecting in Sápmi, which scholars working with historical archaeology in this area are facing, and which have been in focus in the two described projects.

In Sweden, many people, including some scholars, do not recognize the colonial dimension in Swedish history, and the very word 'colonialism' in relation to the Saami areas is still today quite controversial (see discussions in Fur 2006, 2016; Höglund and Andersson Burnett 2019; Naum and Nordin 2013; Ojala 2019; Ojala and Nordin 2015, 2019; cf. also Lehtola 2015). Some researchers prefer using 'internal colonialism' as a term for the historical situation in Sápmi, in order to distin-

guish this situation from overseas colonialism. However, the use of the concept of internal colonialism in the Saami context has been criticized, as it presupposes an already existing state structure within which colonial practices take place (e.g. Lindmark 2013). The historian Gunlög Fur, who has studied Swedish involvement in colonial ideologies and projects, has expressed her view on colonialism in the following way, which I find relevant in the Saami context:

> *My point of departure… is in a definition of colonialism as a process through which a state power unilaterally seizes the right to decide over an Indigenous people's territory, culture and economy, under the pretense that they possess a superior social system. This implies that colonialism also involves notions of racial/ethnic and cultural inequality between ruling and subaltern people, the pursuit of political dominance, and the physical and economic exploitation of Indigenous people* (Fur 2016: 244; my translation).

There has been a general reluctance to acknowledge Sweden as a colonial power, and a tendency to see Swedish colonialism as a different kind of colonialism, somehow 'kinder' and 'less colonial' than that of other colonial powers. This is the case not only in relation to Sápmi and the Saami populations, but also concerning the colonial projects of the Swedish state in other parts of the world, such as the Swedish colony 'New Sweden' in North America in the 17th century (see e.g. Fur et al. 2016).

In general, the knowledge about the colonial history of Sweden is very limited among the public in Sweden – and this is a theme that has not been much discussed in schools, or in universities for that matter, until very recently. However, the understandings of colonial histories and relations, and colonial expansion and exploitation in Sápmi, have direct relevance for present-day conflicts over land and cultural rights in northern Sweden.

Some scholars have recently started to discuss Swedish involvement in colonial politics and economics, arguing for the need to examine Swedish colonialism in relation to wider European colonial ideologies and practices (see e.g. Fur 2006, 2013, 2016; Höglund and Andersson Burnett 2019; contributions in Naum and Nordin 2013).

Colonialism, and its currents of discrimination, racism, segregation and assimilation, has had strong impact on the politics of identity and belonging in Sápmi, a theme which has been discussed by several researchers (see e.g. Beach 2007; Gaski 2008; Åhrén 2008). For instance, in Finland, there has been a heated debate on definitions of indigeneity and criteria for Saaminess, especially for the electoral register for the Saami Parliament. The debate is connected with notions of colonialism and their impact on processes of Indigenous identities today, as well as with views on the roles and positions of Saami research (see Junka-Aikio 2019; Lehtola 2015; Nyyssönen 2015; Valkonen 2019). These debates illustrate the complex and contested nature of politics of belonging, and politics of inclusion and exclusion, in Sápmi.

10.6 Extractive industries and protest movements

In recent years, there has been a mining boom with plans for many new mines in Sápmi, as well as in many other parts of the Arctic and Sub-Arctic regions. The mining boom in the Swedish part of Sápmi has been facilitated and encouraged by the Swedish state's mining policies, aiming to develop Sweden's position as a leading mining country (Haikola and Anshelm 2016; cf. Ojala and Nordin 2015). However, the expansion of the mining sector, adding to other exploitations of natural resources in Sápmi with roots stretching back to the early modern period, leads to shrinking spaces for and multiple pressures on reindeer herding and other economies and threatens traditional livelihoods and

landscape uses (Gärdebo et al. 2014; Sehlin MacNeil 2017; Össbo 2014). These added pressures have fuelled protest movements among Saami groups, as well as among environmentalist groups.

The Saami Parliament in Sweden has called for a cease in new exploitations of mineral resources in Sápmi until the Swedish government can guarantee the protection of Saami Indigenous rights. The Saami Parliament has especially emphasized the need for mechanisms for ensuring the principles of free, prior and informed consent in natural resource exploitation (see *Sametinget, Gruvor i Sápmi*).

Several mining projects in the Saami areas in Sweden have been met by protest movements. The protests at Gállok, outside of Jokkmokk, have become an important symbol for the Saami struggle for greater self-determination and for a decolonization of the policies and legislation of the Swedish state (Liliequist and Cocq 2017; Persson et al. 2017). Another example are the plans for a new mine at Nasafjäll, on the Norwegian side of the border. Nasafjäll has, since the 17th century, been a symbol for the colonial oppression of the Saami, a symbol which is activated in today's protests. There have also been disputes and conflicts in Finland concerning extended mining activities in the Saami areas (e.g. Komu 2019; Lassila 2018).

In these protest movements, the question of Saami land rights and the role of indigeneity and Indigenous rights in Sweden are central – and, consequently, the understanding of history and the connections between past and present becomes very important. In the conflicts over land rights, Saami activists are talking not only about a colonial *past*, but also about a colonial *present*.

Not least the conflicts over land rights and mining in Sápmi have attracted attention in the mass and social media, and have led to discussions on the role of Saami Indigenous rights in society. One very important court case – with much public attention – the case of the Girjas Saami Village versus the Swedish state, dealing with the rights of the Girjas Saami Village to hunting and fishing, has also activated debates on the position of the Saami as an Indigenous people and the application of Saami Indigenous rights in Sweden (see e.g. Allard et al. 2015 and Brännström this volume). At present, there are on-going discussions in Sweden about a truth commission concerning the Swedish state's policies and practices towards the Saami, dealing with themes such as discrimination, racism, forced assimilation, language policies, boarding school experiences, racial biological investigations and the loss of Saami land rights. Saami groups have emphasized the importance that a truth commission must be Saami-led and involve Saami voices and experiences, in order to handle the often very sensitive and traumatic histories, and that this work should lead to concrete results and changes in policies (see *Sametinget, Sanningskommission*). The Swedish government should have a special responsibility to facilitate, and provide funding, for such work. This could also be argued in relation to repatriation processes, which also require resources and funding, and which will be further discussed in the next section of the paper.

In Norway, there is an ongoing truth commission concerning the Norwegianization process towards the Saami and Kven populations. In Finland, a process has been started concerning a truth commission dealing with the Saami population. The Swedish church has also initiated a reconciliation process with the Saami people. The Swedish church has, among other things, published a two-volume anthology on the historical relations between the church and the Saami people (Lindmark and Sundström 2016). The Swedish church has also been actively supporting Saami requests for repatriation and reburial of Saami human remains in collections (see further below). Furthermore, in Sweden, a truth and reconciliation commission concerning the Swedish state's treatment of Tornedalians, the Meänkieli-speaking minority population in the Torne River Valley region, has recently been established by the Swedish government (cf. Persson 2018)

10.7 Anatomical collecting and demands for repatriation and reburial

The collecting of Saami material culture in the 17th and 18th centuries was transformed into a more large-scale ethnographical collecting of Saami material objects in the 19th and 20th centuries. With the development of anatomical, and racial, research in the 19th century, the national and international interest in the Saami led to the collecting of not only material objects, but also human remains in Sápmi. This aspect of colonial collecting in Sápmi has been, and still is, very painful and traumatic for many Saami people, and the human remains in collections have been at the center of recent repatriation and reburial debates. In the following, I will discuss this theme, as it is such an important part of colonial collecting, and as it illustrates some of the challenges that archaeologists and other scholars confront when dealing with colonial history in Sápmi.

In the 19th and early 20th century, a large amount of human remains, especially crania, were collected, or plundered, from deceased people, as well as burial grounds and churchyards in Sápmi, in search of genuine Saami human remains for anatomical and later racial biological collections and research (Ojala 2009, 2016; Svanberg 2015). There are also many accounts about local protests and resistance against the collecting or plundering of human remains in the 19th and early 20th centuries, and of the often unethical and offensive ways in which the excavations or collecting took place, often in secrecy and with different kinds of manipulations (Ojala 2009: 242–251, 2016). Today, there are several collections of Saami human remains stored in different museums in the Nordic countries and other parts of the world, resulting from this practice of collecting.

In recent years, demands have been put forth by Saami activists and Saami institutions, such as the Saami Parliament, for the repatriation and reburial of Saami human remains in collections, with references to discourses on human rights and international law, demanding a thorough investigation of the historical background to these collections as well as a decolonization of the policies and practices of the Swedish state as concerns Saami heritage management. These collections are today deeply disturbing to many people, and the anatomical collecting of Saami human remains – often seen as part of Swedish colonialism in Sápmi – is an emotionally and symbolically very important issue.

The demands for repatriation and reburial connect with the international movement of Indigenous peoples, seeking the right to self-determination, and are part of a larger discussion on Saami Indigenous rights. However, the situation as concerns Saami influence and control over cultural heritage matters vary greatly among the different states. In Norway, the Saami Parliament has part of the responsibility for Saami heritage, including the right to control the old anatomical collections of Saami human remains (Holand and Sommerseth 2013), but in Sweden the Saami Parliament does not have the power to decide in these matters.

During the 19th century and the early 20th century, three large anatomical collections were created at the Karolinska Institutet in Stockholm, Uppsala University and the University of Lund, with human remains from Saami groups, as well as from many other groups of people in Sweden and other countries (Svanberg 2015). According to a recent report, commissioned by the Swedish government, Saami remains are stored in at least 11 museums in Sweden. The same number of museums store human remains from Indigenous groups from other countries (Drentzel et al. 2016).

Internationally, debates on repatriation and reburial issues have been important for a long time (see e.g. Colwell 2017; Fabian 2010; Fforde 2004; Fforde et al. 2002; Hillerdal et al. 2017; Jenkins 2011; Turnbull 2017), but these issues have begun to be debated in Sweden only recently. In the Saami context, claims for greater self-determination in heritage issues, and claims for repatriation and reburial, have been raised for instance at Saami conferences in the recent decades (see e.g. *Duoddaris* 2002; Harlin 2019b: Mulk 2009; Ojala 2009: 228–233; Xanthaki et al. 2017). Saami museums in

Sweden, Norway and Finland have initiated survey projects, attempting to gather information on the extent of the collections of Saami human remains (Edbom 2005; Harlin 2008; these surveys have, however, not been complete).

In 2007, the Saami Parliament in Sweden decided, after demands from Saami cultural workers and activists, to demand, firstly, a complete survey of all Saami human remains in state collections and how they have become part of these collections, and secondly, a repatriation and a worthy reburial of the human remains (*Sametinget* 2007; cf. Ojala 2009: 251–262). The demands led to a broader debate on these issues in Sweden, which raised the awareness among the public in Sweden of the old anatomical collections and their histories. The Saami Parliament in Sweden has also recently appointed an ethical committee. One of their priorities has been issues concerning repatriation and reburial of Saami human remains in collections.

In 2017, the proposal of the Swedish government for new national cultural heritage policies raised the issue of repatriation of Indigenous human remains, and has pointed to the need for national guidelines for handling human remains in collections and responding to repatriation claims, which have not existed in Sweden earlier (*Proposition Kulturarvspolitik* 2017). The National Heritage Board has been responsible for developing these national guidelines for museums, which have recently been published (RAÄ 2020a, 2020b).

There have been only a few reburial cases with Saami human remains in Sweden. One of these concerns the so-called Soejvengeelle's grave in Tärna/Dearna, Västerbotten County, in 2002 (Heinerud 2004; Stångberg 2005), and another the so-called Gransjö grave, near Frostviken/Frööstege in Jämtland County, in 2011 (Hansson 2012). In both of these cases, new analyses and datings were conducted before reburying the remains, illustrating the possibility to combine scientific historical investigations with respect for the requests of local communities for reburial of the human remains.

The largest reburial case in Sweden has concerned human remains from the 17th- and 18th-century church yard in Lycksele/Likssjuo, Västerbotten County, which were reburied in August 2019 (see Aurelius 2019; Samefolket 2019). Lycksele was, as mentioned above, one of the church and market place established by the Swedish crown in the early 17th century, as part of the expansion of the Swedish state into the Saami areas in the north, with the aim to control trade, taxation, judicial and religious affairs. The church yard was excavated in the 1950s and the human remains were transferred to the Historical Museum in Stockholm for analyses. However, the remains 'disappeared' in the museum and were 'rediscovered' only a few years ago. They were subsequently sent to the Västerbotten County Museum in Umeå/Ubmeje, when a reburial process was initiated. A very interesting local process took place, in which the Lycksele Saami Association/Liksjuon Sámiensiäbrrie, the Lycksele municipality, the Swedish church and the Västerbotten County Museum participated – working not only for the return and reburial of the human remains, but also to investigate what had actually happened in the 1950s and how the remains had been treated since then. At the reburial ceremony in Lycksele in August 2019, with several hundred participants, the Sámi Parliament, several museums, the Swedish church and the Swedish government were represented, and the Historical Museum made a public excuse for the ways in which the remains had been treated.

In Finland, there has also been a reburial of Saami human remains from the anatomical collections at the University of Helsinki in Inari/Aanaar in 1995 (Lehtola 2005). In Norway, there have been a few reburial cases, the largest one being the reburial of Skolt Saami human remains from the anatomical collections at the University of Oslo in Neiden/Njauddâm in 2011. This was a debated case with different opinions in the local Saami community whether to rebury the remains or conduct more research on the remains in order to explore local history (see Svestad 2013, 2019; see also Mathisen 2017).

There are also some ongoing cases being discussed in Sweden. The most debated case concerns the human remains excavated in 1915 from the old churchyard at Rounala, north of Karesuando/

Gárasavvon, which were brought to the anatomical collections at Uppsala University (see Ojala 2009: 258–261; Wiklund 1916). Demands have been put forth for the reburial of the human remains and the Sámi Parliament has also been engaged in this issue. At the same time, new research has produced datings of the burials to the Middle Ages, much older than earlier thought, which give new important perspectives on the medieval history of the area and medieval influences from Christianity (Aronsson 2013; Fjellström 2020; Lidén et al. 2019; Wallerström 2017). At present, the human remains are deposited at the Ájtte – Swedish Mountain and Sámi Museum in Jokkmokk, but without the right to rebury the remains. This example illustrates some of the complexities and dilemmas of reburial debates, and points to the need for more research on the medieval and early modern history in this region of Sápmi, not least concerning the history of Christian influences and mission before the 17th century (see also Lundmark 2016; Rasmussen 2016).

Another case concerns the excavated human remains from the early modern church yard at Silbojokk/Silbbajåhkå in Norrbotten County. Silbojokk was the silver works, refining the silver ore from Nasafjäll, in the 17th century, and as such a powerful symbol for Swedish colonialism, forced labor and forced conversion in Sápmi. Due to erosion from the damming of the Lake Sädvvájávrre, rescue excavations have had to take place at the old church yard (see Lindgren 2015, 2019). Some demands for a reburial of these bones have been put forth, but it is at present unclear what will happen with the human remains from Silbojokk.

When discussing claims for repatriation and reburial it is also important to consider the perspective of international law. In particular, the UN Declaration on the Rights of Indigenous Peoples contains a number of paragraphs dealing with Indigenous cultural rights, including statements about the right of Indigenous peoples to the repatriation of their human remains (Ojala 2009: 234–235; *UN Declaration on the Rights of Indigenous Peoples;* see also Xanthaki et al. 2017). However, the UN Declaration has not yet been applied in practice in Swedish legislation or heritage management practice, and needs to be considered and discussed by the different actors in the heritage field in Sweden.

The repatriation and reburial demands have mostly concerned the old anatomical collections of Saami human remains. It is important to see the anatomical collecting in the larger historical contexts, as part of a history of colonial collecting and appropriation, but also to recognize that the anatomical and later racial biological research, for which many Saami human remains were collected, contributed to notions of the Saami as an inferior people, which in turn have legitimized discrimination, marginalization and oppression of Saami groups and individuals (Ojala 2016).

However, repatriation debates have not only concerned collections with human remains. Also, material culture objects, such as the sacred Saami drums, which were collected or confiscated in the 17th and 18th centuries by agents of the Swedish crown or church, have been in focus for repatriation claims. Often in research, most attention has been put on sacred objects, such as the Saami drums or *sieidi* stones. However, as Eeva-Kristiina Harlin has pointed out, everyday objects may be as important, or more important, for Saami communities, as they carry the potential to convey details of everyday life, traditions, handicraft techniques and materials, and also a sense of attachment and belonging (Harlin 2019a).

Repatriation has often been discussed in a rather simplified manner, as a conflict of interest between researchers and museum professionals on the one hand and members of local and Indigenous communities on the other. However, reality is often much more complex, and the concept of repatriation also needs to be critically examined. Often, repatriation processes are complex and ambivalent processes, with many voices, interests and values represented by different stakeholders. Over time, the positions, views and interests of the stakeholders might change. It is also important to recognize that there often are a variety of views, interests and priorities in each of the groups, such as for instance within a local Indigenous community or among professional archaeologists.

Although repatriation has often been viewed as a conflict of interests, there are also positive examples that repatriation processes can lead to new relations and collaborations (see contributions in e.g. Fforde et al. 2002; Gabriel and Dahl 2008; Tythacott and Arvanitis 2014). Repatriation is not only about a return of objects or human remains, often it is also about development of new relations between museums, scholars and local and descendant communities. Many repatriation processes entail exchange of knowledge and experiences, and co-production of new knowledge and understanding. In these processes, it is also important for archaeologists and osteologists to inform about the value, and potential, of scientific studies of human remains for the study of local and regional histories.

10.8 Conclusions

To conclude the discussion in this paper, I would like to raise some final points, stemming from the research in the two projects, *A Colonial Arena* and *Collecting Sápmi*, which I think can be relevant for the wider field of Saami studies. The two projects have demonstrated the complexities of colonial histories in Sápmi and the connections between past and present, as well as the need to critically examine notions of Swedish colonialism in Sápmi and the positions of archaeology and heritage management in Sweden.

I have discussed different aspects of early modern colonial history in Sápmi, and some of the legacies of this history today. I would argue that the exploitation of natural resources in the 17th century and the early modern collecting of Saami material culture, as well as the 19th- and early 20th-century collecting of Saami human remains, are closely interconnected, through the colonial relations in Sápmi, past and present, representing different aspects of extractive practices and colonial collecting over time. The early modern mining and works sites, the objects, such as the Saami drums, but also the human remains, are part of different, sometimes competing and conflicting, narratives about the past and the present: what stories are told, and whose voices are allowed to be heard?

In my view, there is a strong need for historical perspectives on the present-day conflicts over land rights, for instance concerning mining in Sápmi: not only perspectives on the mining activities as such, but also on the cultural, political and ideological contexts of historical mining. As has been discussed in this paper, the current land conflicts have deep historical roots, stretching back at least to the 17th century. At the same time, archaeologists also need to be aware of the present-day contexts in which historical-archaeological research will be interpreted and debated.

Furthermore, I think archaeological perspectives can be of importance in these societal debates: engagements with places and landscapes, and the traces of earlier times in the ground, which have the potential to give voice to people, places, things and events, which were never recorded in the historical records. As the case studies in the project *A Colonial Arena* have shown, there is a great archaeological potential at many of the early modern sites in Sápmi. Many of these sites are also rather poorly protected and vulnerable for future exploitations.

The research projects have also demonstrated that in current conflicts over land and cultural rights, the notions and understandings of colonial history and heritage in Sápmi are central. In sum, Swedish colonialism in Sápmi needs to be explored more thoroughly – also in relation to European colonial ideologies and practices elsewhere in the world. It is also very important to acknowledge and analyze Saami agency, participation, opposition, resistance and protest in the colonial processes, including the mining and the appropriation and collecting of material objects as well as human remains. Here, it is important to recognize and examine the complexities and dynamics involved in colonial encounters and relations in Sápmi, including diversity, changes, innovations and individual and intergenerational differences within local Saami communities.

More research is needed on the histories of appropriating and collecting material objects and human remains. The relations between the collecting of Saami material culture in the 17th and 18th century and the collecting of Saami human remains in the 19th and early 20th century is an important theme, which has been little examined in earlier research. The international trade and exchange with Saami human remains has also been little studied: Where are the human remains today, at what museums and institutions, and how did they end up there? These are some issues that future research needs to address.

The cases discussed in this paper – mining in Sápmi and the early modern collecting of Saami material culture, which have been explored in the two research projects, as well as the collecting of Saami human remains in the 19th and early 20th centuries and the present-day demands for repatriation and reburial – illustrate the complexities of connections between past and present, complexities which archaeologists should consider. They also show that colonialism is not located only in the past, but is part of the field of tension in which archaeologists work today. In Sweden, there is a great need for more discussions on power relations and Saami self-determination in the field of heritage management – and the roles and responsibilities of scholars and museums and other heritage institutions.

Finally, as an archaeologist and researcher, I would like to add that if we want to contribute to a process of 'decolonization' in Sápmi, we also have to recognize and deal with archaeology's own colonial history and present, and the power relations involved in current archaeological research and heritage management. This is a mission we need to embrace together.

Acknowledgements

This article has been written as part of the research project Collecting Sápmi: Early modern globalization of Sámi material culture and Sámi cultural heritage today, which has been funded by **the Swedish Research Council** *(421-2013-1917), and the research project Understanding the cultural impact and issues of Lapland mining: A long-term perspective on sustainable mining policies in the North, funded by* **the Academy of Finland** *(283119). I would also like to thank two anonymous reviewers for their constructive comments on an earlier version of the manuscript. Finally, I would like to thank* **Jonas Monié Nordin***, with whom I have been collaborating for several years in the research projects discussed in this article, for many interesting discussions on colonialism and historical archaeology.*

Bibliography

Allard, C. et al. 2015 = Rasbiologiskt språkbruk i statens rättsprocess mot sameby. *Dagens Nyheter*, 2015-06-11.

Andersson Burnett, L. 2019. Translating Swedish colonialism: Johannes Schefferus' Lapponia in Britain c. 1674–1800. *Scandinavian Studies* 91(1): 134–162.

Aronsson, K-Å. 2013. Research on human remains of indigenous people: Reflections from an archaeological perspective (with an example from Rounala). In H. Fossheim (ed.): *More than just bones. Ethics and research on human remains*, pp. 65–79. Oslo: The Norwegian National Research Ethics Committees.

Awebro, K. 1983. *Luleå Silververk. Ett norrländskt silververks historia*. Bothnica 3. Luleå: Norrbottens Museum.

Awebro, K, N. Björkenstam, J. Norrman, S. Petersson, Y. Roslund, S. Sten, and E. Wallquist, 1989. *Silvret från Nasafjäll. Arkeologi vid Silbojokk*. Stockholm: Riksantikvarieämbetet.

Beach, H. 2007. Self-determining the self: Aspects of Saami identity management in Sweden. *Acta Borealia* 24(1): 1–25.

Bergling, R. 1964. *Kyrkstaden i övre Norrland. Kyrkliga, merkantila och judiciella funktioner under 1600- och 1700-talen*. Kungl. Skytteanska samfundets handlingar 3. Uppsala: Almqvist & Wiksells.

Bromé, J. 1923. *Nasafjäll. Ett norrländskt silververks historia*. Stockholm: Nordiska bokhandeln.

Bäärnhielm, G. 1976. *I Norrland hava vi ett Indien. Gruvdrift och kolonisation i Lappmarken under 1600-talet*. Historiska småskrifter. Stockholm: Ordfront.

Christoffersson, R. 2010. *Med tre röster och tusende bilder. Om den samiska trumman*. Religionshistoriska forskningsrapporter 20. Uppsala: Uppsala University.

Colwell, C. 2017. *Plundered Skulls and Stolen Spirits. Inside the Fight to Reclaim Native America's Culture*. Chicago: University of Chicago Press.

Drenzel, L, L. Gustafsson Reinius, K. Hauptman, L. Hejll, and F. Svanberg. 2016. *Mänskliga kvarlevor vid offentliga museer. En kunskapsöversikt*. Stockholm: Statens Historiska museum.

Duoddaris. 2002 = Vem äger kulturarvet? Anföranden vid konferens om återföringsfrågor vid Ájtte, Svenskt Fjäll- och Samemuseum 6–8 juni 2000. *Duoddaris* 20. Jokkmokk: Ájtte, Svenskt Fjäll- och Samemuseum.

Edbom, G. 2005. *Samiskt kulturarv i samlingar. Rapport från ett projekt om återföringsfrågor gällande samiska föremål*. Jokkmokk: Ájtte, Svenskt Fjäll- och Samemuseum.

Fabian, A. 2010. *The Skull Collectors. Race, Science, and America's Unburied Dead*. Chicago: University of Chicago Press.

Fforde, C. 2004. *Collecting the Dead. Archaeology and the Reburial Issue*. London: Duckworth.

Fforde, C, J. Hubert and P. Turnbull (eds.). 2002. *The Dead and their Possessions. Repatriation in Principle, Policy and Practice*. One world archaeology 43. London and New York: Routledge.

Fjellström, M. 2020. *Food Cultures in Sápmi. An Interdisciplinary Approach to the Study of the Heterogeneous Cultural Landscape of Northern Fennoscandia AD 600–1900*. Theses and Papers in Scientific Archaeology 16. Stockholm: Stockholm University.

Fur, G. 2006. *Colonialism in the Margins. Cultural Encounters in New Sweden and Lapland*. The Atlantic world 9. Leiden: Brill.

Fur, G. 2013. Colonialism and Swedish history: Unthinkable connections? In M. Naum and J. M. Nordin (eds.): *Scandinavian Colonialism and the Rise of Modernity. Small Time Agents in a Global Arena*, pp. 17–36. Contributions to global historical archaeology. New York: Springer.

Fur, G. 2016. Kolonisation och kulturmöten under 1600- och 1700-talen. In D. Lindmark. and O. Sundström (eds.): *De historiska relationerna mellan Svenska kyrkan och samerna*, pp. 241–281. Forskning för kyrkan 33. Skellefteå: Artos & Norma.

Fur, G, M. Naum, and J. M. Nordin. 2016. Intersecting worlds: New Sweden's transatlantic entanglements. *Journal of Transatlantic American Studies* 7(1): 1–22.

Gabriel, M. and J. Dahl. (eds.) 2008. *Utimut. Past Heritage – Future Partnerships. Discussions on Repatriation in the 21st Century*. IWGIA document 122. Copenhagen: International Work Group for Indigenous Affairs.

Gaski, L. 2008. Sami identity as a discursive formation: Essentialism and ambivalence. In H. Minde, H. Gaski, S. Jentoft, and G. Midré (eds.): *Indigenous Peoples. Self-determination, Knowledge, Indigeneity*, pp. 219–236. Delft: Eburon.

Gärdebo, J, M-B. Öhman, and H. Maruyama. (eds.) 2014. *RE: Mindings. Co-Constituting Indigenous, Academic, Artistic knowledges*. Uppsala multiethnic papers 55. Uppsala: Uppsala University.

Haikola, S. and J. Anshelm. 2016. Mineral policy at a crossroads? Critical reflections on the challenges with expanding Sweden's mining sector. *The Extractive Industries and Society* 3: 508–516.

Hansson, A. 2012. Kvinnan från Gransjön. *Jämten* 2013: 23–27.

Hansson, S. 2015. *Malmens land. Gruvnäringen i Norrbotten under 400 år*. Tornedalica 63. Luleå: Tornedalica.

Harlin, E-K. 2008. *Recalling Ancestral Voices – Repatriation of Sámi Cultural Heritage. Rapport från projektseminarium 3–5 oktober 2007 vid Siida Samemuseum, Enare, Finland*. Inari: Siida Sámi Museum.

Harlin, E-K. 2017. Recording Sámi heritage in European museums: Creating a database for the people. In L. Förster, I. Edenheiser, S. Fründt, and H. Hartmann (eds.): *Provenienzforschung zu ethnografischen Sammlungen der Kolonialzeit. Positionen in der aktuellen Debatte*, pp. 69–84. München: Museum Fünf Kontinente.

Harlin, E-K. 2019a. Returning home: The different ontologies of the Sámi collections. In T. H. Eriksen, S. Valkonen, and J. Valkonen (eds.): *Knowing from the Indigenous North. Sámi Approaches to History, Politics and Belonging*, pp. 47–66. London and New York: Routledge.

Harlin, E-K. 2019b. Sámi archaeology and the fear of political involvement: Finnish archaeologists' perspectives on ethnicity and the repatriation of Sámi cultural heritage. *Archaeologies* 15: 254–284.

Harlin, E-K, J. M. Nordin, and C-G. Ojala. Forthcoming. *Samiskt kulturarv och kolonialt samlande. Kartläggning och kulturhistorisk översikt*.

Heinerud, J. 2004. *Rapport över* återbegravning *av skelett, RAÄ 195:1, Tärna socken, Storumans kommun, Västerbottens län*. Unpublished excavation report. Umeå: Västerbottens Museum.

Hillerdal, C, A. Karlström, and C-G. Ojala (eds.). 2017. *Archaeologies of 'Us' and 'Them'. Debating History, Heritage and Indigeneity*. Routledge studies in archaeology 24. London and New York: Routledge.

Holand, I. and I. Sommerseth. 2013. Ethical issues in the semi-darkness: Skeletal remains and Sámi graves from Arctic Northern Norway. In H. Fossheim (ed.): *More than Just Bones. Ethics and Research on Human Remains*, pp. 21–47. Oslo: The Norwegian National Research Ethics Committees.

Höglund, J. and L. Andersson Burnett. 2019. Introduction: Nordic colonialisms and Scandinavian studies. *Scandinavian Studies* 91(1–2): 1–12.

Jenkins, T. 2011. *Contesting Human Remains in Museum Collections. The Crisis of Cultural Authority*. Routledge research in museum studies 1. New York: Routledge.

Junka-Aikio, L. 2019. Institutionalization, neo-politicization and the politics of defining Sámi research. *Acta Borealia* 36(1): 1–22.

Komu, T. 2019. Dreams of treasures and dreams of wilderness: Engaging with the beyond-the-rational in extractive industries in northern Fennoscandia. *The Polar Journal* 9(1): 113–132.

Kroik, Å. V. 2007. *Hellre mista sitt huvud än lämna sin trumma*. Föreningen för bevarandet av samisk kultur och folkmedicin 2007. Hönö: Boska.

Kuoljok, S. 2020. *"Det är nästan så att jag blir tårögd": Dokumentation av samiska föremål vid Skokloster slott och Livrustkammaren*. Duoddaris 32. Jokkmokk: Ájtte, Svenskt Fjäll- och Samemuseum.

Lassila, M. M. 2018. Mapping mineral resources in a living land: Sami mining resistance in Ohcejohka, northern Finland. *Geoforum* 96: 1–9.

Lehtola, V-P. 2005. “The right to one’s own past”: Sámi cultural heritage and historical awareness.” In M. Lähteenmäki and P. M. Pihlaja (eds.): *The North Calotte. Perspectives on the Histories and Cultures of Northernmost Europe*, pp. 83–94. Publications of the Department of History 18. Helsinki: University of Helsinki.

Lehtola, V-P. 2015. Sámi histories, colonialism, and Finland. *Arctic Anthropology* 52(2): 22–36.

Lidén, K., M. Fjellström, and T. Wallerström. 2019. Nya resultat från Eskil Olssons Rounala-grävning 1915. In P. Moritz (ed.): Norrbotten 2018–2019: Arkeologi, pp. 235–261. *Norrbottens hembygdsförbund, Norrbottens museum årsbok 2018–2019*. Luleå: Norrbottens museum.

Liliequist, M. and C. Cocq (eds.). 2017. *Samisk kamp. Kulturförmedling och rättviserörelse*. Sámi dutkan 8. Umeå: H:ström.

Lindgren, Å. 2015. *Silbojokk 2015: Arkeologisk räddningsundersökning av kyrka och kyrkogård inom Raä Arjeplog 368:1, Arjeplogs KRÖLM, Arjeplogs kommun, Lapplands landskap, Norrbottens län*. Excavation report. Luleå: Norrbottens Museum.

Lindgren, Å. 2019. Silbojokk. In P. Moritz (ed.): Norrbotten 2018–2019: Arkeologi, pp. 263–279. *Norrbottens hembygdsförbund, Norrbottens museum årsbok* 2018–2019. Luleå: Norrbottens museum.

Lindgren, Å, J. M. Nordin, and C-G. Ojala. 2020. *Tornedalens bergsbruk under 1600-talet. Rapport över specialinventering och kartering*. Uppsala: Uppsala University.

Lindmark, D. 2013. Colonial encounter in Early Modern Sápmi. In M. Naum and J. M. Nordin (eds.): *Scandinavian Colonialism and the Rise of Modernity. Small Time Agents on A Global Arena*, pp. 131–146. Contributions to global historical archaeology. New York: Springer.

Lindmark, D. and O. Sundström (eds.). 2016. *De historiska relationerna mellan Svenska kyrkan och samerna*. Volume I and II. Forskning för kyrkan 33. Skellefteå: Artos & Norma.

Lundmark, B. 2016. Medeltida vittnesbörd om samerna och den katolska kyrkan. In D. Lindmark and O. Sundström (eds.): *De historiska relationerna mellan Svenska kyrkan och samerna*, pp. 221–240. Forskning för kyrkan 33. Skellefteå: Artos & Norma.

Manker E. 1938. *Die lappische Zaubertrommel. Eine ethnologische Monographie. 1, Die Trommel als Denkmal materieller Kultur*. Acta Lapponica 1. Stockholm: Thule.

Manker, E. 1950. *Die lappische Zaubertrommel. Eine ethnologische Monographie. 2, Die Trommel als Urkunde geistigen Lebens*. Acta Lapponica 6. Stockholm: Thule.

Mathisen, S. R. 2017. The three burials of Aslak Hætta and Mons Somby. Repatriation narratives and ritual performances. *Museum Worlds: Advances in Research* 5: 22–34.

Mulk, I. M. 2009. Conflicts over the repatriation of Sami cultural heritage in Sweden. *Acta Borealia* 26(2): 194–215.

Naum, M. and J. M. Nordin. (eds.) 2013. *Scandinavian Colonialism and the Rise of Modernity. Small Time Agents in a Global Arena*. Contributions to global historical archaeology. New York: Springer.

Nordin, J. M. 2012. Embodied colonialism: The cultural meaning of silver in a Swedish colonial context in the seventeenth century. *Journal of Post-Medieval Archaeology* 46(1): 143–165.

Nordin, J. M. 2015. Metals of metabolism: The construction of industrial space and the commodification of Early Modern Sápmi. In M. P. Leone and J. E. Knauf (eds.): *Historical Archaeologies of Capitalism*, 2nd edition, pp. 249–272. Contributions to global historical archaeology. New York: Springer.

Nordin, J. M. and C-G. Ojala. 2015. Collecting Sápmi: Early Modern collecting of Sámi material culture. *Nordisk museologi* 2015(2): 114–122.

Nordin, J. M. and C-G. Ojala. 2017. Copper worlds: A historical archaeology of Abraham and Jakob Momma-Reenstierna and their industrial enterprise in the Torne River Valley, c. 1650–1680. *Acta Borealia* 34(2): 103–133.

Nordin, J. M. and C-G. Ojala. 2018. Collecting, connecting, constructing: Early Modern commodification and globalization of Sámi material culture. *Journal of Material Culture* 23(1): 58–82.

Nordin, J. M. and C-G. Ojala. 2019. Johannes Schefferus och svensk kolonialism i de samiska områdena. In: *Om anledningar till att anlägga kolonier. En dissertation framlagd 1668 av Johannes Schefferus och Johan Hoffman*, pp. 11–36. Bibliotheka Neolatina Upsaliensis XIV. Uppsala: Uppsala University.

Nurmi, R. 2019. A clockwork porridge: An archaeological analysis of everyday life in the early mining communities of Swedish Lapland in the seventeenth century. In T. Äikäs and A-K. Salmi (eds.): *The Sound of Silence: Indigenous Perspectives on the Historical Archaeology of Colonialism*, pp. 90–118. New York: Berghahn Books.

Nyyssönen, J. 2015. Det samiske politiske etablissementet og motmobiliseringen – Konflikter om etniske kategorier i Finland. In B. Bjerkli and P. Selle (eds.): *Samepolitikkens utvikling*, pp. 359–387. Oslo: Gyldendal akademisk.

Ojala, C-G. 2009. *Sámi Prehistories. The Politics of Archaeology and Identity in Northernmost Europe*. Occasional Papers in Archaeology 47. Uppsala: Uppsala University.

Ojala, C-G. 2016. Svenska kyrkan och samiska mänskliga kvarlevor. In D. Lindmark and O. Sundström (eds.): *De historiska relationerna mellan Svenska kyrkan och samerna*, pp. 983–1018. Forskning för kyrkan 33. Skellefteå: Artos & Norma.

Ojala, C-G. 2017. Contested colonial history and heritage in Sápmi: Archaeology, indigeneity and local communities in Northern Sweden. In C. Hillerdal, A. Karlström, and C-G Ojala (eds.): *Archaeologies of "Us" and "Them". Debating History, Heritage and Indigeneity*, pp. 258–271. Routledge studies in archaeology 24. London and New York: Routledge.

Ojala, C-G. 2018. Encountering 'the other' in the North: Colonial histories in Early Modern Northern Sweden. In M. Naum. and F. Ekengren (eds.): *Facing Otherness in Early Modern Sweden. Travel, Migration and Material Transformations, 1500–1800*, pp. 209–228. Society for Post-Medieval Archaeology monograph 10. Woodbridge: Boydell Press.

Ojala, C-G. 2019. Discussion: Colonialism past and present – Archaeological engagements and entanglements. In T. Äikäs and A-K. Salmi (eds.): *The Sound of Silence: Indigenous Perspectives on the Historical Archaeology of Colonialism*, pp. 182–201. New York: Berghahn Books.

Ojala, C-G. and J. M. Nordin. 2015. Mining Sápmi: Colonial histories, Sámi archaeology, and the exploitation of natural resources in Northern Sweden. *Arctic Anthropology* 52(2): 6–21.

Ojala, C-G. and J. M. Nordin. 2019. Mapping land and people in the North: Early modern colonial expansion, exploitation and knowledge. *Scandinavian Studies* 91(1–2): 98–133.

Ojala, C-G. and J. M. Nordin. Forthcoming. Nodes of colonialism: Church and market places in the early modern landscapes of Sápmi.

Persson, C. 2018. *"Då var jag som en fånge." Statens övergrepp på tornedalingar och meänkielitalande under 1800- och 1900-talet*. Övertorneå: Svenska Tornedalingars Riksförbund.

Persson, S, D. Harnesk, and M. Islar. 2017. What local people? Examining the Gállok mining conflict and the rights of the Sámi population in terms of justice and power. *Geoforum* 86: 20–29.

Proposition Kulturarvspolitik 2017 = *Regeringens proposition 2016/17:116. Kulturarvspolitik*. Swedish government, Stockholm 23 February 2017.

Rasmussen, S. 2016. *Samisk integrering i norsk og svensk kirke i tidlig nytid. En komparasjon mellom Finnmark og Torne lappmark*. PhD thesis. Tromsø: University of Tromsø.

RAÄ 2020a = *God samlingsförvaltning: Stöd i hantering av mänskliga kvarlevor i museisamlingar*. Stockholm: Riksantikvarieämbetet.

RAÄ 2020b = *God samlingsförvaltning: Stöd för museer i återlämnandeärenden*. Stockholm: Riksantikvarieämbetet.

Samefolket 2019 = *Samefolket* 2019 (5).

Sametinget 2007 = Sametinget, Sammanträdesprotokoll 2007:1, Sammanträdesdatum 2007-02-20--22, Lycksele. Kiruna: Sametingets kansli.

Sametinget, Gruvor i Sápmi = Gruvor i Sápmi. Available at: https://www.sametinget.se/gruvor [Visited 10 June 2019].

Sametinget, Sanningskommission = Behövs en sanningskommission? Available at: https://www.sametinget.se/sanningskommission [Visited 2 September 2019].

Schefferus, J. 1956 [1673]. *Lappland*. Acta Lapponica 7. Uppsala: Gebers.

Sehlin MacNeil, K. 2017. *Extractive Violence on Indigenous Country. Sami and Aboriginal Views on Conflicts and Power Relations with Extractive Industries*. Sámi dutkan 8. Umeå: University of Umeå.

Snickare, M. 2014. Kontroll, begär och kunskap: Den koloniala kampen om Goavddis. *Rig* 97(2): 65–77.

Stångberg, A. 2005. Soejvengeelle: En samisk grav i Vapsten. In Å. V. Kroik (ed.): *Efter förfädernas sed. Om samisk religion*, pp. 40–56. Föreningen för bevarande av samisk kultur och medicin 2005. Gothenburg: Boska.

Svanberg, F. 2015. *Människosamlarna. Anatomiska museer och rasvetenskap i Sverige ca 1850–1950*. The Swedish history museum 25. Stockholm: Statens Historiska Museum.

Svestad, A. 2013. What happened in Neiden? On the question of reburial ethics. *Norwegian Archaeological Review* 46(2): 194–242.

Svestad, A. 2019. Caring for the dead? An alternative perspective on Sámi reburial. *Acta Borealia* 36(1): 23–52.

Turnbull, P. 2017. *Science, Museums and Collecting the Indigenous Dead in Colonial Australia*. Palgrave Studies in Pacific History. Cham: Springer.

Tythacott, L. and K. Arvanitis (eds.). 2014. *Museums and Restitution. New Practices, New Approaches*. Farnham: Ashgate.

UN Declaration on the Rights of Indigenous Peoples = United Nations Declaration on the Rights of Indigenous Peoples. Available at: http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf [Visited 1 Feb 2019].

Valkonen, S. 2019. Conceptual governance on defining indigeneity – The Sámi debate in Finland. In T. H. Eriksen, S. Valkonen, and J. Valkonen (eds.): *Knowing from the Indigenous North. Sámi Approaches to History, Politics and Belonging*, pp. 142–162. London and New York: Routledge.

Wallerström, T. 2017. *Kunglig makt och samiska bosättningsmönster. Studier kring Väinö Tanners vinterbyteori*. Instituttet for sammenlignende kulturforskning 165. Oslo: Novus.

Wiklund, K. B. 1916. *Rounala kyrka*. Uppsala: Almqvist & Wiksell.

Xanthaki, A, S. Valkonen, L. Heinämäki, and P. Nuorgam (eds.). 2017. *Indigenous Peoples' Cultural Heritage. Rights, Debates and Challenges*. Leiden: Brill Nijhoff.

Åhrén, C. 2008. *Är jag en riktig same? En etnologisk studie av unga samers identitetsarbete. Etnologiska skrifter* 47. Umeå: University of Umeå.

Össbo, Å. 2014. *Nya vatten, dunkla speglingar. Industriell kolonialism genom svensk vattenkraftutbyggnad i renskötselområdet 1910–1968*. Centrum för samisk forskning. Umeå: University of Umeå.

VERTAISARVIOITU
KOLLEGIALT GRANSKAD
PEER-REVIEWED
www.tsv.fi/tunnus

11
The enhanced role of archaeological and historical research in court proceedings about Saami land rights

Malin Brännström*

Abstract

Within Swedish law, Saami land rights have been highly controversial since early in the 20th century. In case law, Saami land rights have been placed in the historical context, since it has been established that they are based on long-standing land use. This conclusion puts historical use of land at the very center of any judicial assessment. Herein, two lawsuits about Saami land rights, in which archeology has been used to validate pre-historic and historic land use are compared: the Härjedalen Case, initiated in 1991 and relating to winter grazing rights, and the Girjas Case about hunting and fishing rights. This article describes how archaeological and historical material has been interpreted within the lawsuits and analyzes the impact on the legal assessments. The comparison illustrates how it can be problematic to use archaeological arguments in court proceedings. Nevertheless, it is concluded that archaeology, as part of wider interdisciplinary research, may contribute knowledge about past land use, thus allowing the understanding of Saami land rights to evolve. Furthermore, how researchers within archeology and other disciplines could respond to the fact that the results of their work might be used outside academia and within the very different environment of judicial proceedings is discussed.

Keywords: Archaeology, Saami land rights, indigenous peoples' rights, the Girjas Case, customary rights

11.1 Introduction

The winters are long and the vegetation growing period is short in arctic areas. Under these circumstances, advanced and sophisticated subsistence strategies have developed over thousands of years (Bergman et al. 2008; Bergman et al. 2013; Raitio 2014). Traditional subsistence among the indigenous Saami has been based on fishing, hunting, plant gathering, and – eventually – reindeer herding (Bergman et al. 2013). Historically, Saami society was divided according to a siida system, meaning allocation of land, water, and natural resources between different groups, primarily based on kinships (Bergman et al. 2008). From the 16th century and onwards, the Swedish Crown encouraged settler penetration and colonization of the northern parts of the country, and from the 1750s this process completely changed the demographic situation in the area; the Saami is now a minority group within all municipalities (SOU 2006:14: 84–86). Through colonization and demarcation processes carried

*Department of Law, Umeå University and Silvermuseet/INSARC, Arjeplog, malin.brannstrom@umu.se

out by the Crown, forest lands became private property (Arell 1979: 16). These historical developments have led to a complex legal situation, and during the last century indigenous Saami in Sweden have claimed that they are holders of private land rights within Sápmi (the Saami homeland area) that should be fully recognized by the Swedish state.

The Swedish state's attitude towards Saami land rights has varied over time. Up until the 1890s, Saami land use was considered to be based on customary rights that would be protected in relation to other land use (Korpijaakko-Labba 1994: 464–468; Päiviö 2011: 250–251). However, at the beginning of the 20th century the state began to express the view that Saami land use was based on what was termed 'the Lapp privilege', meaning that the law was the foundation of the right to use land, and also that the state could regulate land use through new or amended legislation (SOU 2006:14: 387). The Saami opposed the state's position and claimed that they were holders of real property rights. Thus, the status of Saami land rights came to be under dispute for most of the 20th century.

In 1966, Saami representatives initiated court proceedings, known as the Taxed Mountains Case, claiming ownership before the Swedish state to specific high mountain areas in the county of Jämtland. In 1981 the Swedish Supreme Court rejected the claim of Saami ownership (NJA 1981:1). The judgement remains central since the Supreme Court made some important statements to clarify the legal status of Saami land rights. For instance, it was stated that Saami land use is based on the long-standing use of land, justified by 'immemorial prescription' (Sw: *urminnes hävd*), i.e., the continuous use of the land since 'time immemorial'. In 2011 the legal status of Saami land rights as property rights was confirmed in the Nordmaling Case, when the Supreme Court stated that winter grazing in the eastern coastal areas in the county of Västerbotten is based on the long-standing use of land, explained as customary rights (NJA 2011:109). Accordingly, it was clarified within the Swedish legal system that Saami land rights are private property rights based on the long-standing use of land. This conclusion puts the historical use of land at the very center of judicial assessments, which requires informed references to robust archaeological and historical material and a profound understanding of historic Saami land use.

Ever since the verdict in the Taxed Mountains Case of 1981, changes within the legislation to implement Saami land rights have been discussed. The Swedish government has set up several public inquiries to look into Saami policy (SOU 1989:41; SOU 1999:25; SOU 2001:101; SOU 2005:116; SOU 2006:14), and all have concluded that the Swedish legislation has deficiencies when it comes to the implementation of Saami land rights. For instance, it is not clear how Saami may use land and how these rights relate to other land rights. However, the proposals submitted to change legislation have not been adopted, mainly because of strong opposing interests. Forestry, mining, and energy production are important and powerful financial interests, and the strengthening of Saami land rights might have adverse effect on these industries. Consequently, politicians have not been willing to reform the legislation since the matter at stake is considered to be of such a delicate nature (Bengtsson & Torp 2012: 145–147).

Because of the political failure to enact amendments in legislation, the content and extent of Saami land rights has primarily been developed through case law. Together, the Taxed Mountains Case and the Nordmaling Case indicate that Saami can turn to the court system to force legal changes to Saami land rights (Brännström 2018b: 34). The Girjas Case, one of the lawsuits which will be described in this article, is the latest major legal action in which the meaning of Saami land rights has been examined at length, and the political failure to adopt legislation that is in accordance with the status of Saami land rights as property rights will probably lead to other court proceedings in the future. This development is also reinforced by changes in the legal culture. Legal positivism has been the most significant idea to have shaped Sweden's legal culture during the 20th century. Within legal positivism, legal arguments based on historical evidence have been considered of relatively minor importance. However, since the 1990s, Swedish legal culture has changed; historical perspectives and debates are increasingly being considered in the legal context (Modéer 2015: 39). Consequently, mature and

dispassionate historical deliberation is required as the courts seek to resolve legal problems in other ways than has previously been the norm.

Since there are few written sources originating from the Saami themselves (the Saami language largely being an oral medium until the late 20th century), Saami history has primarily been written by others. The existing sources are mostly public material and historical records produced by Swedish government representatives of various sorts. The limited knowledge about Saami lifestyle among the majority population and among public administrators has inevitably affected the quality of the written material that is available (SOU 2006:14: 291). In this situation, archaeology, history and other related disciplines can help to fill the gap with important insights into the historical preconditions upon which sits the development of the understanding of Saami land rights.

This article aims to describe how archeology has been used within two lawsuits about Saami land rights to validate historic land use: the Härjedalen Case (Court of Appeal for Southern Norrland 2002), initiated in 1991 in relation to winter grazing rights, and the Girjas Case (Swedish Supreme Court, Case no 853-18) about hunting and fishing rights. This article describes how archaeological material has been interpreted within the lawsuits and analyzes how this has affected the legal assessments. It describes the challenges connected with the use of archaeology within this type of legal proceeding. Nevertheless, the comparison shows how archaeology, as an intrinsic part of interdisciplinary research, may contribute knowledge about Saami land use during historical times, thus becoming a potentially crucial part of any judicial proceedings. To set the context of the lawsuits, the political and judicial backgrounds of the disputes are described. Thereafter, the archeological material that has been referred to by the parties is presented, together with the legal assessments of the courts. The comparison leads to a discussion about the relevance of archaeological and historical material within such court proceedings. Finally, the article discusses how archaeologists and other researchers could respond to the fact that the results of their work might be used within such processes in the future.

11.2 The Härjedalen Case

11.2.1 Background

This section describes the so-called Härjedalen Case, the first judicial proceedings about Saami land rights in which archaeological findings became a central part of the legal assessment. Härjedalen is situated in the southern part of Sapmi. In this area, Saami have lived side by side with others for a very long period of time. In Härjedalen there is a long history of discontent and opposition from land owners, politicians, and other actors against Saami reindeer herding. Towards the end of the 19th century the pressure increased on the Saami, who were seen as intruders on the land of the farmers. This was legitimized by the 'advancement theory' that was propagated by researchers at that time (Ojala 2009: 155; Rumar 2014: 25). Within archaeology, South Saami prehistory has been an especially controversial field of study (Ojala 2009: 141). This can partly be explained by the parallel land use of different groups over a long period of time.

In 1990, some 500 land owners and three forest companies took legal action against five samebyar (Sw: a *sameby* is a geographic area and a legal person that represents reindeer herding Saami) in Härjedalen (Handölsdalen, Idre, Mittådalen, Idre, and Tännäs samebyar). The question at stake was whether Saami reindeer herders had the right to graze reindeer on private forest land during the winters in the region of Härjedalen. Hence, this lawsuit addresses the question of whether land rights had been established at all. In 1992 the forest companies withdrew their claim after a settlement with the samebyar. Nevertheless, the private landowners continued to claim that the samebyar did not have any legal right to graze reindeer on their real estate.

11.2.2 Archaeology

Because of the legal arguments presented by the land owners and the samebyar, a central issue within the lawsuit was to examine who had used the land during historical times – farmers or nomadic Sami. This put issues about ethnicity on the agenda. A substantial amount of archaeological documentation was presented to the court. Within the lawsuit, two archaeologists acted as expert witnesses to interpret the archeological material. The land owners referred to professor Evert Baudou of Umeå University, and the samebyar referred to associate professor Inger Zachrisson of Uppsala University. Even before the lawsuit, Baudou and Inger Zachrisson had debated the character of the ethnic groups in the southern parts of Sapmi (Baudou 1988; Zachrisson 1988). The debate continued during the court proceedings and the two archaeologists presented divergent interpretations of the archeological material.

Baudou based his statement on a boundary hypothesis that he had developed about the emergence of an early Saami and early Nordic ethnicity in northern Sweden in the first millennium B.C., and the development of a cultural boundary between Upper Norrland and Middle Norrland, which he considered to have had an ethnic significance (Ojala 2009: 131–132). He held that an ethnic categorization had taken place, and that this implied the development of an early Saami ethnicity in the northern parts of Norrland and an early Nordic ethnicity in the more southern parts of Norrland. Consequently, according to Baudou, there were two major cultural areas in the Nordic countries. From around 800 BC, a cultural boundary formed through the northern parts of the provinces of Ångermanland and Jämtland. However, Baudou stressed that the early Saami and Nordic ethnicities in Norrland were not the same as today, but that the two populations had gradually transformed into the groups seen today. Baudou was of the opinion that the archaeological findings referred to in the Härjedalen Case could not be interpreted clearly as Saami or Nordic.

Zachrisson, on the other hand, interpreted the archaeological material in Härjedalen as being Sami. She considered that the 'boundary hypothesis' presented by Baudou was not well-founded. Instead, she interpreted the differences in the archaeological material north and south of the described boundary as differences *within* a Saami society (Ojala 2009: 157). Zachrisson argued that there were two different groups in Jämtland and Härjedalen during the Iron Age and early Middle Age: the Saami culture and a Nordic culture.

A central focus of discussion between the two archaeologists during the lawsuit was the site at Vivallen in the northwestern part of Härjedalen, with dated material from about AD 800–1200 (Ojala 2009: 157–158). Both Zachrisson and Baudou considered the site to be Saami because of the burial customs and the finds, which showed great similarities with the material from Saami sites further north in Sápmi. Zachrisson argued that there was Saami continuity at Vivallen since pre-historic times. According to her, one should assume continuity until the opposite could be proven. Baudou, on the other hand, considered Vivallen to be an isolated phenomenon, without predecessors, contemporaries, or followers. According to Baudou, Vivallen represented a Saami group that had moved from northern Norrland during a period of expansion in that area. He considered that it was not possible to prove continuous Saami presence in Härjedalen.

11.2.3 The legal assessments of the courts

In 1996, Sveg District Court delivered its verdict. It was stated that the burden of proof of the fact that reindeer grazing rights had been established fell on the five samebyar. The Court found that the samebyar had not succeeded in presenting sufficient evidence to prove that they had established a right to graze reindeer on the disputed property. It was concluded that the various interpretations of the archaeologists made it impossible for the court to determine who had used the land during historical times.

The samebyar appealed against the judgement, and in 2002 the Court of Appeal for Southern Norrland came to the same conclusions as the court of first instance. In the Court of Appeal, the discussion about Vivallen continued. Zachrisson submitted additional documentation based in new archaeological fieldwork. The Court of Appeal concluded that, based on the material presented, it was not possible to deduce that Saami had been reindeer herding as nomads in Härjedalen at the end of the 16th century and during the first decades of the 17th century. Instead, the court focused on the period from the 17th century onwards as a starting point for the judicial assessment, primarily basing its deliberation on written governmental sources.

The samebyar appealed against the verdict to the Swedish Supreme Court, which decided not to permit a review (Supreme Court decision 2004). Thus, the judgement of the Court of Appeal became legally binding and it was thereby concluded that there are no established grazing rights on the affected real estate.

11.3 The Girjas Case

11.3.1 Background

Girjas sameby is situated in the northwestern part of Sweden, where the Saami have lived alone long before the modern nation-state of Sweden was established. There are basically no permanent agrarian settlements (Sw: *nybyggen*) within the disputed area, which is located in the high mountains. During the colonization process in the end of the 19th century, the mountain areas to the west of the so-called 'cultivation border' (Sw: *odlingsgränsen*), which is centre stage in the Girjas Case, were regarded as 'Crown lands' (Sw: *kronomarker*). When the first Reindeer Herding Act was implemented in 1886, it was stated that these Crown lands were for exclusive use of the Saami (Prop. 1886:2). Furthermore, the Saami were described as holders of hunting and fishing rights, including the right to free subsistence and commercial hunting.

Through the first Reindeer Herding Act of 1886, a system to administer licenses to hunt and fish in the high mountain area west of the Cultivation border was established. Because the Crown considered that the Saami were not capable or organized enough to operate the licensing system, it was decided that the County Administrations would run it (Prop. 1883: 105). Nevertheless, the licensing system was clearly designed to take account of Saami land use. The Saami were consulted about licenses, and licenses were not granted if the Saami would suffer harm from them. Furthermore, revenues were forwarded to the affected Saami reindeer herding community and to the Saami Fund, which was a special fund to support Saami needs (Reindeer Herding Act of 1886, Section 22). Licenses to hunt and fish were primarily given to locals and people from within the region. Ever since the establishment of the licensing system, the Swedish government has administered the licenses that deal with fishing and small-game resources. Today the license system is regulated in the Reindeer Herding Act Section 32 (SFS 1971:437, Prop. 1971:51).

The Swedish government did not, before or during the Taxed Mountains Court Case, explicitly claim any hunting and fishing rights, only the authority to administer these rights (Bengtsson 2010: 80). However, a turning point came in a government bill regarding hunting in 1987, wherein the state was described as the land owner with hunting and fishing rights (Prop. 1986/87:58: 45). The interest in hunting and fishing for recreation had increased considerably during the previous few decades, and there were powerful lobbying organizations that had argued for a change to open up further the licensing system that governed these activities (Arnesson-Westerdal 1994: 23–28). A few years later, in 1993, a statement about the state´s fishing and hunting rights as the land owner led to

changes within the legal framework to allow everybody to hunt and fish within the high mountain area through the licensing system (Prop. 1992/93:32: 133–152). Consequently, the present institutional arrangements of the licensing system were implemented. In the preparatory works that preceded the changes in the legal framework it was announced that this amendment would better utilize the hunting resources and that it would provide quality recreation experiences to landless hunters at a low price (Prop. 1992/93:32: 133). Today, small-game hunting and fishing provides recreation for local people, other Swedish citizens, and also, since 2007, individuals from countries that are members of the European Union.

Saami representatives protested strongly against the claim to land ownership made by the Swedish state and the changes in the legal framework to open up land for more recreational hunting and fishing, and ever since 1993 the debate about hunting and fishing within the high mountain areas has been intense. In 2003 a commission of inquiry was appointed by the government to propose a new institutional arrangement to administer the licensing system. In 2005 a common pool administration was proposed (SOU 2005:116: 226–247). However, no amendments to the legal framework have been carried out because of strong opposing interests.

From 1999 onwards, the Nordmaling Case, moved slowly through the Swedish court system (NJA 2011:109). As already mentioned, the issue at stake was whether the reindeer herding Saami had the right to graze reindeer during winter on private land in the coastal area. This was the first time that the Saami succeeded in persuading a court that they had established land rights within the Swedish legal system. The result of the Nordmaling Case indicated that the Saami *could* use court proceedings to successfully advance legal positions. With this example in mind, Girjas sameby took legal action against the Swedish state in 2009. The lawsuit was supported by the Swedish National Union of Reindeer Herders (Sw: *Svenska Samernas Riksförbund, SSR*) and all of the samebyar that are members of the Union. Girjas sameby is situated within the county of Norrbotten in the northern parts of Sápmi. Within the sameby, 18 families live and work with reindeer. About 120 individuals are members of the sameby and about 400 have some kind of a social relation to it.

The core of the lawsuit is who is the holder of the hunting and fishing rights in the high mountain area within the territory of Girjas sameby west of the Cultivation border, and as a consequence should decide on licenses allocated for small-game hunting and fishing. The question at stake is thereby not whether land rights have been established as in the Härjedalen Case, rather who has the right to decide issues about the land that follows from the land rights. Girjas sameby argues that the use of land over a long period of time by the Saami has led to them having exclusive hunting and fishing rights. The Swedish state denies that Girjas sameby has exclusive hunting and fishing rights and claims that the state itself, as the land owner, is the superior holder of these rights. The state argues that Saami land use before the middle of the 18th century was fragmented and merely opportunistic in character.

Since both parties have presented very diverse and divergent descriptions of the area´s historical development, a key issue of contention is how the Saami utilized the landscape and the resources during pre-historic and historic times. Indeed, assessing evidence about historic land use has become a central part of the court´s deliberations, and both parties have referred to an extensive array of documentary material and called expert witnesses from different scholarly disciplines: academics from the fields of history, law, archaeology and forest history. Furthermore, the parties have referred to many written sources, primarily material authored by government representatives such as public investigations, government bills, court protocols, and church records. Since an inspection of the area during the hearing was not allowed, Girjas sameby referred to photographs of the area taken during the late 19th century and thereafter, and also a movie filmed from a helicopter ride over the area with audio commentary from one of the elders of the sameby. Furthermore, members of Girjas sameby have been heard during the proceedings.

11.3.2 Archaeology

When it comes to archaeological material, the Swedish state referred to a written statement from an archaeologist who answered five questions raised by the lawyers representing the state. In the written statement the archaeologist commented on a number of central prerequisites in the lawsuit. However, the archaeologist had not previously undertaken any research either within the northern parts of Sweden or within any Saami context. During the hearing, the Swedish state actually withdrew an oral submission from the archaeologist. The District Court commented on the fact that the archaeologist had not undertaken any research within a Saami context, and concluded that his statement had no value as evidence. Consequently, the court concluded that the archaeologist did not have a profound understanding of historical Saami land use. In the end, the information from the archaeologist was discarded and did not in any way determine the outcome of the case.

In contrast, Girjas sameby referred to a number of archaeological finds that had been recorded within the area: various hearths, storage constructions, cooking pits, pit fall systems, dwelling hut foundations (commonly referred to as Stallo-foundations), and other ancient monuments were all adduced as evidence. However, it should be noted that the archeological finds within the specific area are relatively few and far between since national archaeological surveys have been carried out only to a limited degree (Liedgren and Hedman 2005). In addition, Girjas sameby had no funding to perform archeological field-work of their own. Instead, the sameby referred to archaeological studies performed in other nearby high mountain areas, for example work carried out in Sirkas sameby by Mulk (1994).

Since the Swedish state had disputed the description of Saami land use presented by Girjas sameby, locating more material about historical land use was crucial. Therefore, Girjas sameby referred to results from interdisciplinary research primarily carried out by the Institute for Arctic Landscape Research, INSARC, at the Silvermuseet in Arjeplog. Over the last 20 years or so, this institute has carried out research about the relationship between landscape and humans in the northern parts of Sweden which has led to new knowledge about historic Saami land use. Archaeology has been an important part of this interdisciplinary research together with forest history, ecology, and other related disciplines. The results have been published in international journals and tested and examined through the peer-review process. The research has undoubtedly contributed to the field, yielding new and original knowledge about how humans have used the northern landscapes and resources and how human use has affected these landscapes.

A courtroom is an adversarial forum where verbal arguments and other materials have to be presented so that members of the court can comprehend their significance. In this case, there was the added difficulty of presenting academic, and sometimes highly technical, material. Accordingly, Girjas sameby found that it was not sufficient simply to refer to a large number of peer-reviewed academic articles written in English. Instead, Professor Lars Östlund, Swedish University of Agricultural Science, an expert in forest history with a particular focus on ecosystems and human relations, wrote an expert report that described and summarized the conclusions of the academic research that was considered by the court. In addition, Professor Östlund was heard as an expert witness during the proceedings. During the hearing he described how archeology has been interpreted as an essential part of the interdisciplinary work carried out at INSARC.

11.3.3 The legal assessments of the courts

In February 2016, Gällivare District Court came to the conclusion that Girjas sameby is the holder of exclusive hunting and fishing rights within the area under consideration (Gällivare District Court 2016). As a consequence of this decision, the court stated that the Swedish state is not allowed to issue licenses to hunt and fish and that Girjas sameby can decide on licensing these rights without the consent of the state. The reasoning of the court reveals that the description of the characteristics of the landscape, such as the arctic environment and the historic land use, are fundamental parts of the

judicial assessment. As a starting point of the assessment, Gällivare District Court referred to the archeological findings within the area and analyzed these in relation to archaeological findings in nearby areas where more detailed excavations have been carried out. The state had argued that the Stállo sites were of Nordic origin. The court discussed the interpretation of these sites and found that they must be regarded as evidence of Saami land use. Furthermore, the court referred to the description of the landscape and findings of pre-historic and historic land use presented by Professor Östlund. The court concluded that the material referred to by Girjas sameby proved that Saami were present in the area since at least the 6th century AD. Furthermore, based on the material presented, it was concluded that there have been Saami settlements and activities within the area from the 16th century onwards. The court concluded that there is good evidence for the fact that Saami have lived in the area in one way or another at least during the last thousand years. This was the starting point of the legal assessment.

It should be noted that the legal assessment of Gällivare District Court differs from previous interpretations of the concept of 'immemorial prescription'. Previously it has been argued that property rights can be established if the land has been used for approximately 90 years and that this has not been contested by others. With this approach, the relevant period for the judicial assessment starts in the present day and counts 90 years back in time to determine whether land rights have been established (e.g. SOU 2006:14: 389–390; NJA 2011:109 p. 12). However, Gällivare District Court made a completely novel interpretation of the legal concept of 'immemorial prescription', since it was concluded that the Saami had lived in the area for at least a thousand years. After this conclusion, the court considered the period in which the Swedish state had started to act in the area and whether the state thereby had established land rights. This type of reasoning, starting within pre-historical land use leading up to the present situation, clearly puts archaeological material at the forefront of the judicial assessment.

The Swedish state appealed against the verdict. In 2018, the Court of Appeal for Northern Sweden pronounced its judgment, concluding that Girjas sameby has exclusive hunting and fishing rights in relation to the state within the relevant area. The Court of Appeal seems to view the archaeological and historical material in the same way as the District Court. The starting point of the legal assessment here was also based on pre-historic land use. Nevertheless, the Court of Appeal also found that the present licensing system, governed by the state, is in compliance with the constitutional protection of property and not discriminatory. Accordingly, the conclusion was that the Swedish state can continue to decide on the granting of licenses to others. The judgment raises several questions about the meaning of property rights within the Swedish property law system (Brännström 2018a: 39–47).

Both Girjas sameby and the Swedish state appealed against the verdict of the Court of Appeal. The Swedish Supreme Court decided to permit a review, and the hearing took place in Stockholm in September and October 2019. The verdict is expected at the end of 2019.

11.4 Discussion and conclusions

As described above, the understanding of Saami land rights is still incomplete and the legal situation is complex. Consequently, there is a need to develop further our understanding of these rights. Since it has been determined through case law that Saami land rights are based on the long-standing use of land, the historic land use of areas will certainly be relevant in any future court proceedings. An aspect that makes archaeology even more interesting for the implementation of Saami land rights is the recent reinterpretation of the legal concept of 'immemorial prescription' in the Girjas Case. As

described above, the relevant period of time to establish this type of land rights has previously been defined as approximately 90 years, starting in the present day and counting back in time. However, in a radical departure from precedent, the first and second instances of court analysis in the Girjas Case have considered pre-colonial land use as the starting point of the judicial assessment. If the Swedish Supreme Court upholds this way of evaluating Saami land rights, the relevance of archaeology and history will increase in the future. Against this background it is relevant to reflect upon the use of archaeology and history within the Härjedalen Case and the Girjas Case.

Initially, it can be concluded that the Härjedalen Case illustrates that there was no common understanding of the historical prerequisites for the assessment of Saami land rights at that time (Ojala 2009: 156). The various arguments and historical developments presented by the parties in the Girjas Case reveals that this is still the case. Thus, one task of the courts is to determine the historical prerequisites that will be the starting point of the judicial assessment. However, judges have little knowledge about Saami history, and the courts have no independent archaeologists or historians upon whom they can call as a matter of routine to settle disputed points, as is the case for example with technical issues. Consequently, the courts are dependent on the evidence referred to by the parties and on interpretations of the material referred to from specialists drawn from within archaeology, history and other disciplines.

However, the Härjedalen Case clearly illustrates the challenges that can occur when archaeological material is referred to within judicial proceedings (Ojala 2009: 156). It reveals how an ongoing archaeological discussion about South Saami prehistory was brought into court proceedings. As described above, the two archaeologists that were called as experts had very divergent understandings of important ethnic and cultural factors, which clearly affected their interpretations. The various interpretations indicate that the scientific debate about South Saami land use was starting to develop at the time of the proceedings. The debate has subsequently progressed on to a more nuanced approach to Saami cultural expressions and ethnic signals within the South Saami area (Hansen and Olsen 2006: 107). Accordingly, it would have been better if the academic debate about the interpretations of the archaeological material had taken place within academia. Instead, the discussion took place within a lawsuit, and a court room is not an arena for constructive academic discussion and nuanced debate about interpretations. Within civil lawsuits another type of debate takes place, in which one of the parties has the burden of proof and must provide evidence enough to support the claims raised. Consequently, clear positions from the experts are expected. It is also a part of the civil law process to point out weaknesses in the evidence presented by the opposing party. Therefore the attorneys ask questions to highlight shortcomings presented by the opposing council. In the Härjedalen Case this seems to have led to fixed positions between the archaeologists that did not facilitate constructive academic debate.

The Härjedalen Case also illustrates that there is a risk that the researchers and the court may contribute to maintaining historical perceptions and ideas that are far from fixed, and in fact are under debate and ripe for re-evaluation in the future. This seems to have been the case with the impact of the 'advancement theory' (No: *fremrykningsteorien*) in the Härjedalen Case. The 'advancement theory' was the most significant theme within South Saami historical studies from the beginning of the 20th century (Ojala 2009: 143). This theory presumed that Saami had advanced from the north into more southerly areas where farmers were already living from the 17th century onwards. The theory was first presented by the Norwegian historian Yngvar Nielsen in 1891, and it was supported by archaeological and historical researchers in Sweden right up until the 1990s. However, the theory has been increasingly disputed (Rumar 2014: 25). Baudou had, earlier in his career, supported this theory (Baudou 1974), and some of his statements in the Härjedalen Case seems to have traces of these thoughts. Rumar has concluded that the assessment of the Court of Appeal was made based on this theory, and has criticized this as a misinterpretation of the historical situation during the Härjedalen Case (Rumar 2014: 39).

The comparison between the Härjedalen Case and the Girjas Case also illustrates that the various historical developments in different areas within Sapmi will lead to diverse foundations for legal proceedings. It can be concluded that the historical situation in Härjedalen is complicated, since farmers and nomadic Saami have lived in the same areas for a long time. This clearly affected the interpretations of the archaeological material within the Härjedalen Case. In this respect, the Girjas Case concerns an area where the Saami context is clearer, which makes the interpretations of the archaeological and historical material easier when it comes to the question of who used the land.

Another difference is that the archaeological material used in the Härjedalen Case was not interpreted within a broader interdisciplinary framework. In the Girjas Case, on the other hand, the interpretation of the archaeological material was a part of interdisciplinary research, in this case primarily allied with ecology and forest history. This approach allows broader conclusions to be drawn that are relevant for the legal assessment, for instance regarding the character of Saami land use. Accordingly, the Girjas Case exemplifies how archaeology and its various related disciplines can augment our knowledge about Saami land use, which will ultimately assist in the developing understanding and implementation of Saami land rights.

In addition, the Girjas Case highlights how the interpretation of archaeological and historical material requires a developed contextual understanding, with consideration of basic factors such as topography, seasonal changes, and weather conditions. Large areas of land are needed for subsistence in this climatic environment and resources must be collected at many diverse sites. Furthermore, social, cultural, economic, and religious aspects should be considered (Bergman et al. 2008). In this respect, the Girjas Case exemplifies how archaeological findings have to be analyzed in relation to settlement patterns and characteristics of mobility.

How can archaeologists and other researchers relate to the ongoing judicial proceedings concerning the implementation of Saami land rights? The legal analyses of the Härjedalen Case and the Girjas Case do raise questions to reflect on in relation to the unsolved issues regarding Saami land rights. Some general thoughts will, therefore, be shared below, in the hope that this encourages further discussions.

Reflections on this topic must be seen in light of the inherently complex relationship between research and indigenous peoples. There has been strong criticism about the way research has been used in relation to indigenous peoples since such research has sometimes been a part of the colonization process itself (Smith 2012); indigenous peoples themselves have seldom decided the questions to ask and what material to use. Often, indigenous peoples have been regarded as little more than the exotic objects of research, and the unique world views and knowledge cultures *within* these groups have not been considered at all. In addition, some academic research has maintained methodological and theoretical approaches that have been grounded in paradigms that are simply not accepted anymore. This has also been the case with archaeology (Ojala 2019). These are contentious aspects of academic work that researchers studying within a Saami context should be aware of. Basically, it is necessary to reflect on one´s position and consider the performance of the study. Who am I who formulates the questions? What must I be aware of and take into account to perform the study and to analyze the material? How can I relate to the colonial context? It has been suggested that researchers working in this type of contested field familiarize themselves with the Saami context and Saami perspectives, and that they are aware of the wider discussions about appropriate methodologies in this sensitive area (Smith 2012). Of course, this must not violate the scientific integrity of the researcher.

It is also suggested that researchers carrying out studies that relates to Saami contexts are aware of the fact that their results may be used as an integral part of the sort of legal proceedings that have been described herein. Considering the legal issues that still remain unresolved, it is likely that questions about who used the land and how intensively will be asked. For example: Who lived in the area? What was the character of the land use? How have various groups related to each other? Is a find of Sámi

origin? These are all complex questions, especially when they touch upon the issue of ethnicity (Jones 1997). Even if this type of question cannot always be answered with certainty, it is suggested that the researcher reflect on them, and, if possible, describe, explain, and interpret the archaeological and historical material with these potential types of question in mind. In addition, if the scientific debate is still developing, it is suggested that the researcher understands the importance of explaining this ongoing process to the court. It is also suggested that the researcher consider whether there are specific issues that need to be analyzed on the basis that they can contribute to legal development. Hopefully, the type of self-reflection suggested above will make researchers better prepared in the future to enter the potentially testing arena of a highly charged courtroom.[1]

Bibliography

Arell, N. 1979. *Kolonisationen i lappmarken.* Några näringsgeografiska aspekter. Stockholm: Esselte Studium.

Arnesson-Westerdahl, A. 1994. *Beslutet om småviltjakten. En studie i myndighetsutövning.* Kiruna: Sametinget.

Baudou, E. 1974. Samernas invandring till Sverige ur arkeologisk synpunkt. In R. Kjellström (ed.): *Sameforskning i dag och i morgon. Rapport från symposium rörande den samiska kulturen 19–20 november 1973 i Nordiska museet*, pp. 27–52. Nordiska Museets jubileumssymposier. Stockholm: Nordiska museet.

Baudou, E. 1988. Samer och germaner i det förhistoriska Norrland: En kritisk översikt över tio års forskning. In P. H. Ramqvist (ed.): *Samer och germaner i det förhistoriska Norrland*, pp. 9–23. *Bebyggelsehistorisk tidskrift* 14.Uppsala: Swedish Science Press.

Bengtsson, B. 2010. Om jakt och fiske i fjällmarken. *Svensk Juristtidning* 95(1): 78–87.

Bengtsson, B. and E. Torp. 2012. Svensk samerätt: Något om den senaste utvecklingen. In T. Henriksen and O. Ravna (eds.): *Juss i Nord: Hav, fisk og urfolk. En hyllest til Det juridiske fakultet ved Universitet i Tromsøs 25-årsjubileum*, pp. 136–147. Oslo: Gyldendal juridisk.

Bergman, I, L. Liedgren, L. Östlund, and O. Zackrisson. 2008. Kinship and settlements: Sami residence patterns in the Fennoscandia Alpine areas around A.D. 1000. *Arctic Anthropology* 45(1): 97–110.

Bergman, I, O. Zackrisson, and L. Liedgren. 2013. From hunting to herding: Land use, ecosystem processes, and social transformation among Sami AD 800–1500. *Arctic Anthropology* 50(2): 25–39.

Brännström, M. 2018a. Samiska markrättigheter i förändring? – Hovrättens dom i Girjas-målet väcker frågor om innebörden av rättigheter till fast egendom. *Juridisk Publikation* (1): 25–47.

Brännström, M. 2018b. Court proceedings to evaluate the implementation of Sami land rights in Sweden. *Retfaerd* 41: 32–45.

Jones, S. 1997. *The Archaeology of Ethnicity. Constructing Identities in the Past and Present*. London and New York: Routledge.

Korpijaakko-Labba, K. 1994. *Om samernas rättsliga ställning i Sverige-Finland. En rättshistorisk utredning av markanvändningsförhållanden och -rättigheter i Västerbottens lappmark före mitten av 1700-talet.* Helsingfors: Juristförbundets förlag.

Liedgren, L. and S. D. Hedman. 2005. Utvärdering av fornminnesinventeringen, 1984–2002 och projektet Skog och Historia, 2000–2004, i Norrbotten – med exempel på tillämpningar av de digitala registret och framtida inriktningar. *Rapport* 43. Arjelog: Silvermuseet.

Modéer, K. Å. 2015. Sami law in Late Modern legal contexts. In C. Allard and S. Funderud Skogvang (eds.): *Indigenous Rights in Scandinavia. Autonomous Sami Law*, pp. 37–48. Juris Diversitas. Farnham: Ashgate.

1. "After this chapter was completed and had passed through the peer review process, the Swedish Supreme Court released its verdict concerning the Girjas Case on January 23, 2020: Case No. T 853–18. The Supreme Court based their reasoning on the long-term use of the Sámi that have lived in the relevant area and concluded that they had exclusive hunting and fishing rights by 1750 and that the Swedish state thereafter had not acted in any way to revoke these rights. Hence, the Supreme Court concluded that Girjas sameby has the right to decide on the granting of licenses to others. The Supreme Court also stated that ILO Convention no. 169 is legally binding in Sweden when it comes to Sámi customary rights, although the convention has not been formally ratified. The verdict of the Supreme Court must be regarded as a milestone within the Swedish legal system when it comes to Sámi land rights."

Mulk. I. M. 1994. *Sirkas. Ett samiskt fångstsamhälle i förändring Kr.f.−1600 e.Kr.* Studia archaeologica Universitatis Umensis 6. Umeå: Umeå University.

Nielsen, Y. 1891. Lappernes fremrykning mot syd i Trondhjems stift och Hedemarkens amt. *Det norske geografiske selskaps* årbog 1, 1889–1890: 18–52.

Ojala, C- G. 2009. *Sámi Prehistories. The Politics of Archaeology and Identity in Northernmost Europe*. Occasional Papers in Archaeology 47. Uppsala: Uppsala University.

Ojala, C- G. 2019. Colonialism past and present: Archaeological engagements and entanglements. In T. Äikäs and A. K. Salmi (eds.): *The Sound of Silence. Indigenous Perspectives on the Historical Archaeology of Colonialism*, pp. 182–201. New York: Berghahn Books.

Päiviö, N- J. 2011. *Från skattemannarätt till nyttjanderätt. En rättshistorisk studie av utvecklingen av samernas rättigheter från slutet av 1500-talet till 1886 års rensbeteslag*. Uppsala: Uppsala University.

Raitio, A- M. 2014. *People-Plant Interrelationships. Historical Plant Use in Native Sami Societies*. Acta Universitatis agriculturae Sueciae 2014:85. Umeå: University of Agricultural Sciences.

Rumar, L. 2014. *Historien och Härjedalen. En kritisk analys*. Skrifter från Centrum för samisk forskning 20. Umeå: Umeå University.

Tuhiwai Smith, L. 2012. *Indigenous Methodologies*. London: Zed Books.

Zachrisson, I. 1988. Arkeologi och etnicitet. Samisk kultur i mellersta Sverige ca 1−1500 e.Kr. In P. H. Ramqvist (ed.): *Samer och germaner i det förhistoriska Norrland*, pp. 24–41. *Bebyggelsehistorisk tidskrift* 14. Uppsala: Swedish Science Press.

Public material

Prop. 1883 Kongl. Maj:ts nådiga förordning, rörande de Lappar, som med renar flytta mellan de förenade konungarikena Sverige och Norge; gifven Stockholms slott 6 juni 1883.

Prop. 1886:2 Kungl. Maj:ts proposition till riksdagen med förslag angående de svenska Lapparnes rätt till renbete i Sverige och till lag angående renmärken.

Prop. 1971:51 med förslag till rennäringslag.

Prop. 1986/87:58 om jaktlag m.m.

Prop. 1992/93:32 om samerna och samisk kultur m.m.

SOU 1989:41 Samerätt och sameting.

SOU 1999:25 Samerna – ett ursprungsfolk i Sverige. Frågan om Sveriges anslutning till ILO:s konvention nr 169.

SOU 2001:101 En ny rennäringspolitik – öppna samebyar och samverkan med andra markanvändare.

SOU 2006:14 Samernas sedvanemarker.

Court cases

NJA 1981:1 The Taxed Mountains Case

NJA 2011:109 The Nordmaling Case

Swedish Supreme Court, decision April 29th 2004, case no T 1152-02

Swedish Supreme Court, case no 853-18

Court of Appeal for Southern Norrland, judgement February 15th 2002, case no T 58-96

Court of Appeal for Northern Norrland, judgement January 23rd 2018, case no T 214-16

Sveg District Court, judgement February 21st, case no 58-96