

SEASONAL SETTLEMENT

IN THE MEDIEVAL AND EARLY
MODERN COUNTRYSIDE

edited by PIERS DIXON & CLAUDIA THEUNE

RURALIA XIII



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MODERN COUNTRYSIDE**

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RURALIA XIII

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Entangled flexibility, adaptability, and seasonality in inland Scandinavia – the case of agrarian outland use and settlement colonisation

Eva Svensson*

Abstract

The driving force behind agrarian settlement colonisation in the forested Scandinavian inlands in the centuries around or after AD appears to have been the hunt for luxury commodities traded to the elites, such as furs. The settlement colonisation was carried out through an innovation package encompassing farmstead – shieling – outland use, due to limited natural conditions suitable for agriculture. During the Viking Age and the Early Middle Ages in the area investigated in this chapter, Northern Värmland, there was extensive pitfall hunting and production of bloomery iron aimed at an external market. When the market broke down in the High Middle Ages, the forest peasants increased the agrarian outland use and the local self-subsistence economy. In particular shielings, seasonally used sites for cattle breeding, hay making, and occasionally some cereal cultivation in the outland have proven to have been adaptable and flexible key enablers for sustainable local communities.

However, pollen analyses have shown that cereal cultivation was the major land use at some historically known shieling sites, and had been so since their founding in the Early to Middle Iron Age, c. AD 0-400. Although cereal cultivation was present on most shielings, and there were fields for outland cereal cultivation, these most often date to the second half of the Middle Ages and early modern times, and were part of the increased agrarian outland use that took place after the collapse of the market for outland commodities. In this chapter it is therefore argued that the finds of substantial cereal cultivation from the time of agrarian settlement colonisation in the Early to Middle Iron Age at some historically known shieling sites point either to outland cereal cultivation being another component of the settlement colonisation innovation package, or that the settlement colonisation could be staged through a system of satellite farmsteads.

Keywords: *shieling, outland cereal cultivation, settlement innovation package, pollen analysis, outland use.*

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Résumé

Flexibilité, adaptabilité et saisonnalité en Scandinavie centrale – l'aménagement rural et l'utilisation agricole des paysages naturels

La force motrice de la colonisation agricole dans les terres boisées scandinaves durant la période autour et après JC semble avoir été la recherche de produits de luxe pour les vendre aux élites riches, par exemple les fourrures. La colonisation était réalisée grâce à un ensemble d'innovations incluant le pâturage d'été en forme des petites fermes isolées saisonnières – des petites huttes, *shielings* – adaptées aux conditions naturelles propices à une agriculture limitée. Durant l'époque des vikings et du Haut Moyen-Âge dans la région du nord du Värmland, faisant objet de cet article, il y eut le piègeage ainsi qu'une grande production de fer destinée à un marché extérieur. Lorsque ce marché s'est effondré au Moyen-Âge Central, les fermiers forestiers ont renforcé la colonisation du paysage naturel ainsi que l'économie locale d'autosubsistance. Il s'est avéré que les fermes isolées et utilisées de manière saisonnière pour l'élevage de bovins, pour la fenaison et parfois aussi pour la culture céréalière, étaient les facteurs clés pour l'évolution des communautés locales durables, car adaptables et flexibles.

Cependant, les analyses de pollen ont montré que la culture des céréales était même la principale utilisation des terres autour de certains sites historiquement connus où l'on trouve ces fermes isolées saisonnières, et ceci depuis le début jusqu'au milieu de l'Âge du Fer, autour de 0 à 400 ans après JC. Bien que la culture céréalière ait été présente sur la plupart des sites de fermes isolées saisonnières et qu'il y ait eu des champs utilisés pour la culture céréalière dans les paysages naturels, ceux-ci datent le plus souvent de la seconde moitié du Moyen-Âge et du début de l'époque moderne. Ils faisaient partie de l'exploitation des paysages naturels qui a eu lieu après l'effondrement du commerce des marchandises provenant des domaines forestiers. Cet article veut montrer que la découverte de cultures céréalières substantielles dès l'époque de la colonisation agricole du début jusqu'au milieu de l'Âge du Fer sur certains sites de fermes saisonnières historiquement connus indique que la culture céréalière est soit un des éléments innovateurs pour l'aménagement rural des paysages naturels soit que la colonisation du paysage forestier naturel a été organisée par le biais d'un système de fermes satellites.

Mots-clés : *fermes isolées saisonnières, culture céréalière aux paysages forestiers, ensemble d'innovations de colonisation, analyse de pollen, exploitation du paysage naturel.*

Zusammenfassung

Verschränkte Flexibilität, Anpassungsfähigkeit und Saisonalität im skandinavischen Binnenland – Landesausbau und die Nutzung von Agrarlandschaften

Eine treibende Kraft für die Gründung von Agrarsiedlungen im skandinavischen bewaldeten Binnenland in den Jahrhunderten um oder nach n. Chr. scheint die Jagd nach Luxusgütern gewesen zu sein, so z.B. Pelze, die an die Eliten verkauft wurden. Die Gründung der Siedlungen erfolgte im Rahmen eines Innovationspakets, das die Nutzung von saisonalen Gehöften in Gebieten beinhaltete, die aufgrund der dort vorherrschenden natürlichen Bedingungen für die Landwirtschaft nur begrenzt geeignet waren. Während der Wikingerzeit und des frühen Mittelalters gab es in Nordvärmland, so wie in diesem Artikel beschrieben, eine massive Fallenjagd und die Produktion von Renneisen für einen externen Markt. Als dieser Markt im Hochmittelalter zusammenbrach, verstärkten die Waldbauern die Nutzung der Gebiete als Agrarflächen für eine lokale Selbstversorgungswirtschaft. Insbesondere saisonal genutzte Standorte für die Viehzucht, die Heuernte und selten auch Getreideanbau in den Waldgebieten haben sich als anpassungsfähige und flexible Schlüsselfaktoren für nachhaltige lokale Gemeinschaften erwiesen.

Pollenanalysen haben jedoch gezeigt, dass der Getreideanbau an einigen historisch bekannten saisonalen Standorten die Hauptnutzung der Flächen war, und zwar bereits seit ihrer Besiedlung in der frühen bis mittleren Eisenzeit, ca. 0-400 n. Chr.. Obwohl auf den meisten Flächen Getreideanbau betrieben wurde und es Felder für den Anbau von Getreide in den Waldgebieten gab, werden diese meistens auf die zweite Hälfte des Mittelalters und die frühe Neuzeit datiert und waren Teil einer verstärkten Nutzung der Gebiete als Agrarflächen nach dem Zusammenbruch des Marktes für Holzprodukte. In diesem Artikel wird daher argumentiert, dass die Funde eines erheblichen Getreideanbaus bereits seit der Gründung landwirtschaftlicher Siedlungen in der frühen bis mittleren Eisenzeit an einigen historisch bekannten saisonalen Standorten darauf hindeuten, dass der Getreideanbau in den Waldgebieten ein weiterer Bestandteil des Innovationspakets zur Besiedlung war, bzw. dass die Besiedlung durch ein System von Satelliten-Gehöften in der Umgebung erfolgt sein könnte.

Schlagwörter: *Shieling, Getreideanbau in Waldgebieten, Siedlungsinnovationspaket, Pollenanalyse, Walddnutzung.*

Introduction

In the middle of “nowhere” in the boreal forests in western Sweden, there are a few summerhouses by a dirt road (Fig. 1). The place is called Backadammen, and was a shieling, that is to say, a place in the outland used (mostly) during summertime for grazing cattle (see further below), during most of the 20th century (*Styffe – Styffe 1989*, 120-121). Adjacent to the summerhouses is a mire, used for hay making, by the name of Stakällsmyren. At the turn of the present millennium, a pollen core was taken from Stakällsmyren and analysed as a part of the interdisciplinary project ‘Settlement, shieling and landscape’. This project targeted the hamlet of Backa in northern Värmland as an in-depth case study of the colonisation and long-term development of agrarian settlement and land use in a mountainous boreal forest area. The land use included shielings, hay making, and outland uses such as pitfall hunting and bloomery iron production (*Emanuelsson et al. 2003; Svensson 1998*).

The analysis of the sample from Stakällsmyren proved that the mire had been used for hay making, and that there had been a shieling in modern times close by. The pollen analysis also showed some other more-unexpected phenomena, which will be the core of this chapter. But before introducing these results and the research problem they have created, the phenomenon of shielings and their context will be presented in order to frame the results from Stakällsmyren.

Shielings – the flexible enabler in a versatile economy

In middle and northern Scandinavia, shielings were – until the early 20th century – a common way of organising cattle grazing in areas where there was not enough pasture



Fig. 1. Backadammen, a summerhouse, in the summer of 2018. The mire Stakällsmyren is visible behind the houses to the left (© Eva Svensson).

by the farmsteads through the relocation of grazing to the forested outlands. At the shielings, there were dwelling houses, cowhouses, and fenced-in meadows. In Scandinavia it was women who herded and milked the cattle and processed the milk during the summer season.

The questions of how and when shielings emerged have been discussed among scholars of different academic disciplines, such as ethnography, historical human geography, history, archaeology, and during the last decades palaeoecology as well. The earlier attempts to date the onset of the shieling system were based on proxy data such as place names, archaeological finds material not directly connected to shielings, and written documents and historical maps from early modern to modern times, and the different suggestions for the emergence of shielings have varied from the younger Stone Age to early modern times (*e.g. Cabouret 1989; Erixon 1918, 1956; Frödin 1925; Hougen 1947; Larsson 2009; Sandnes 1989*).

Palaeoecology, often together with archaeology, became a real game changer for shieling investigations. With pollen analysis it became possible to identify when in time land use such as grazing and hay making started at a shieling site. It also became possible to see how land use changed over time. From early phases of sporadic grazing, the shielings evolved to more intensively used sites. In the Norwegian mountains, the onset of grazing could be dated as early the Late Bronze Age to Early Iron Age. The remains of temporary but regular human presence, in form of hearths without buildings, have also been located through excavations. Regular buildings at the shielings have been detected from the Viking Age in Norway and the Middle Ages in Sweden, and it appears that Scandinavians brought with them fully developed shielings when colonising both Iceland and the Faroe Islands (*e.g. Kvamme 1988; Magnus 1986; Magnusson, 1989; Mahler 2007; Petersson 2006; Sveinbjarnardóttir 1991*).

According to the results of interdisciplinary studies, shielings were part of an innovative settlement colonisation package. In fact, without shielings it would probably not have been possible to establish durable, agrarian settlements in large parts of inland Scandinavia, due to scarce and scattered land suitable for agriculture. Moreover, shielings were deeply entangled in the versatile ways of life of the forest farmers, and adaptable to different and changing needs and conditions.

A down-to-earth example of the multifunctionality and flexibility of shielings is cereal cultivation, which took place on and off quite regularly at shielings, at least at shielings not located at too high an altitude for cereals to grow. The irregular cereal cultivation could well have been an answer to changing sizes of individual households, an adaptation to periods of many children (Fig. 2). Also, individual sites changed between being permanent

farmsteads and shielings, something that has called into question how, methodologically, to distinguish between permanent farmsteads and seasonally used shielings (Emanuelsson 2001; Emanuelsson et al. 2003; Karlsson et al. 2010; Svensson 1998 with references).

Shielings also stand out as flexible on a larger scale, expanding and retracting in harmony with fluctuations both in the versatile economy of the local communities of the forest peasants and in the constantly changing market opportunities. In the project 'Settlement, shieling and landscape' it was possible to follow the long-term development through a detailed study of a single but representative hamlet, Backa, in northern Värmland.

Agrarian settlements with more or less fixed tofts and fields were established in the river valley in the centuries



Fig. 2. Clearance cairn, a testimony to cereal cultivation, of an older type at the shieling Kårebolssättern (© Eva Svensson).

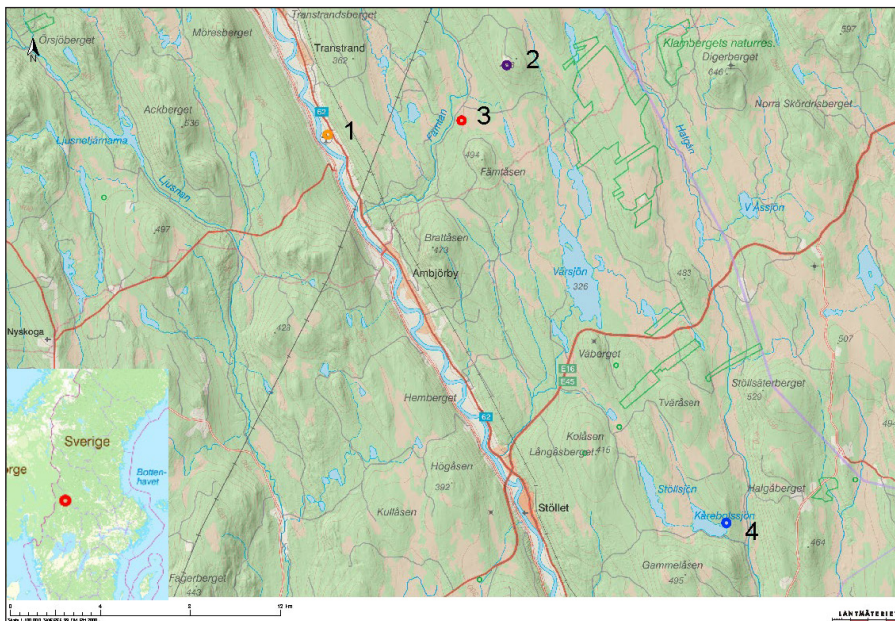


Fig. 3. Locations of 1) the hamlet Backa, 2) the shieling Backasättern, 3) Backadammen, and 4) Kårebolssättern (© Gula Kartan, Lantmäteriet).

before AD 500. Shielings and outland use such as bloomery iron production were initiated in the forested and mountain areas about the same time, in what appears to have been an innovation package for permanent settlement in forested areas that had sparse opportunities for cereal cultivation and cattle breeding (Emanuelsson 2001; Emanuelsson et al. 2003; Svensson 2015, 2018). However, the reason for increased colonisation of these areas appears to have been the exploitation of natural resources and trade in elite luxury products such as furs, even though there were some earlier settlements and hunting of game, such as elk in pitfalls (Lindholm – Ljungkvist 2016).

In the 9th century AD, bloomery iron production increased dramatically and large-scale elk hunting using pitfalls took off. Due to the scale of production, it is clear that it was a question of commodity production and that northern Värmland was taking part in a northern European trade network that preceded the Hanseatic League. In the early 13th century, there was a clear break in the non-agrarian outland use, firstly in bloomery iron production and some 50 years later in pitfall construction and elk hunting as well. The downturn was radical, and production appears to have gone down to nearly nothing. The downturn coincided in time with new societal conditions, such as strengthened royal power, the invention of the blast furnace, and growing Hanseatic interests in Scandinavia, etc.

Having lost their lucrative market, the forest peasants instead increased the agrarian elements of their versatile economy, such as cereal cultivation and cattle breeding. The reorientation of the local economies included an intensified use of shielings, hay making on mires,

and outland agriculture on small fields in the forest (Emanuelsson *et al.* 2003).

In early modern times, the use of shielings and cattle breeding increased greatly. There were now new markets for the forest peasants to focus on. The Swedish Mining District, the centre of the economic wheel in Sweden, engorged all kinds of resources. There was an almost endless need of cattle for food, for making ropes of the hides, for traction, etc. The forest peasants of northern Värmland and other parts of Sweden replied to the demand by breeding and selling cattle to the Mining District, thus again becoming more market orientated (Emanuelsson *et al.* 2003; Myrdal – Söderberg 1991).

The entanglement of the different components of the versatile outland use and the important role of the shielings as flexible enabler and provider of security in the local economies can be considered well illuminated, but there are some anomalies calling for supplementary investigations. One such anomaly is Backadammen, known to have been a shieling in modern times, but with a land use history pointing in another direction. Recently, another (reopened) shieling, Kårebolssättern, a bit south of Backa and Backadammen, has been investigated (Fig. 3). The results indicate that the land use of Kårebolssättern shared some common traits with Backadammen (see below). The discovery that Backadammen is no longer an isolated anomaly calls for a revisiting of the site, and a re-evaluation of how shielings and the innovation package emerged and of whether there were still other kinds of settlements.

So it is time to return to the site of Backadammen and the pollen analysis from Stakällsmyren, and to add some new results from Kårebolssättern.

The pollen analyses of Stakällsmyren and Kårebolssättern

Northern Värmland, where Backadammen is located, is characterised by a narrow valley with sediment soils through which runs one of the largest rivers of Sweden, the meandering Klarälven. The valley is defined by steep hillsides, with a height difference of c. 400 m from valley bottom to the top of the hillside. The hamlet under study, Backa, comprised a farming hamlet situated on the eastern bank of the River Klarälven with fields and meadows adjacent to the settlement site or by the river (meadows), and waste outlands stretching eastwards from the crown of the hillside over a hilly and undulating forested area rich in mires, rivers, and a few lakes.

The mire of Stakällsmyren is located just beside the former shieling, which is now Backadammen, an area with a few summer houses. The area immediately surrounding the site is characterised by relatively flat moraine ground rich in mires and coniferous forest. The site itself, Backadammen, is located on a more silty part

of the moraine close by the medium-sized River Femtan, a tributary to the great River Klarälven. Some of the summer houses have meagre lawns, probably the remains of former shieling meadows.

Stakällsmyren was selected for pollen analysis as a part of the interdisciplinary project ‘Settlement, shieling and landscape’ based on information from written documents and historical maps that the mire had been a medium-rich hay-making one. We were also interested in finding out when the shieling Backadammen, presumed to be of late origin, was established (Emanuelsson *et al.* 2003; Styffe – Styffe 1989, 120-121). However, the pollen analysis of Stakällsmyren did not fit the same pattern as pollen analyses from other shielings or mires for hay making. In fact, the pollen analysis showed that the site had been used for cereal cultivation, specifically barley, from the very onset of land use at the site around AD 400 (Fig. 4). This was unexpectedly early, especially considering its distant location from the Klarälven river valley. The land use, *i.e.* the cereal cultivation, was quite insignificant to start with and the agrarian technology used is unclear. The pollen signals of weeds such as goosefoot and bedstraw, showing that cultivation took place on tilled and manured fields, were not present until c. AD 750. Grazing appears to have been introduced later at Stakällsmyren, as a secondary land use, around AD 800, and hay making on the medium-rich mire not until c. AD 1600, and then only on a small scale (Emanuelsson *et al.* 2003, 97-100). There are no clear indications from the pollen diagram as to when the site became a shieling.

Without considering the historic land use context known from written documents and historical maps, the pollen diagram from Stakällsmyren would probably have been interpreted as showing the vegetation history of a farmstead. We did not make that interpretation in the project ‘Settlement, shieling and landscape’, but left the question more open. One reason was that we were not able to locate the remains of any houses at the site, although this could be explained by the continuous use of the site, both the historically known shieling and the later summer houses.

The main reason was, however, that the site was considered unsuitable for the establishment of a farmstead, due to the poor natural conditions (for a permanent settlement and infields). The long distance to hamlets and farmsteads in the main settlement area on the banks of the River Klarälven made the establishment of a farmstead at Backadammen seem even more unlikely, given the early dating of the site, around AD 400, when there were still good opportunities for establishing new farms on far more suitable soils by the Klarälven river. In fact, the colonisation and establishment of new hamlets in the Klarälven river valley was pursued well into early modern times.

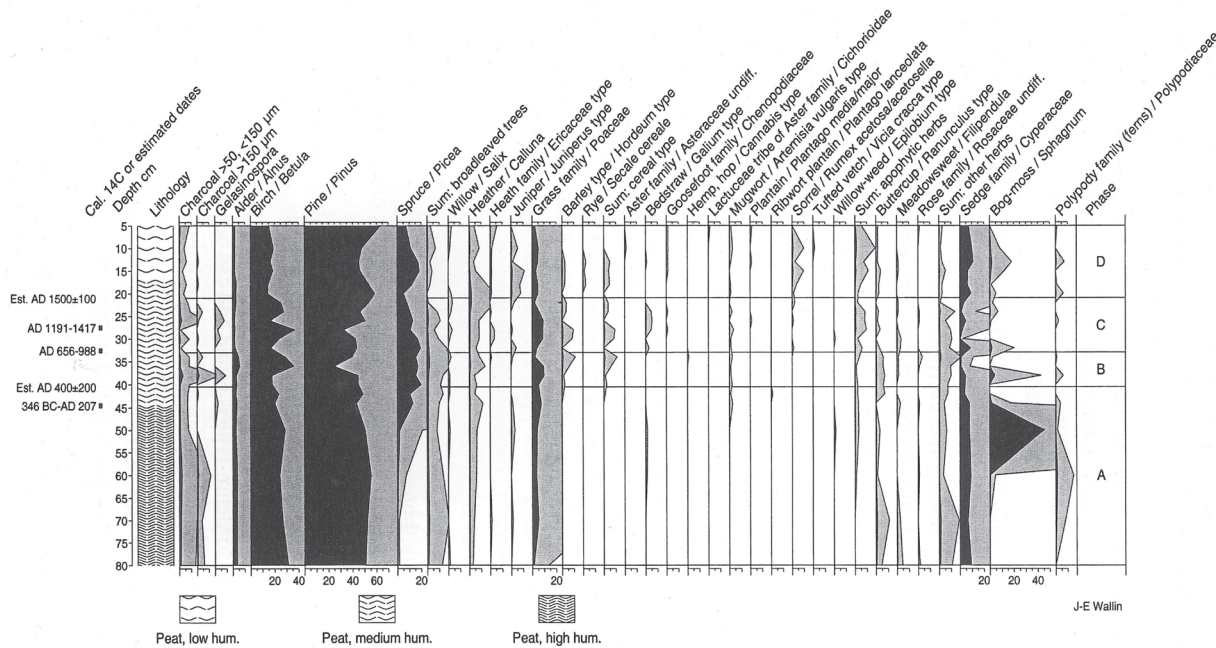


Fig. 4. Pollen diagram from Stakällsmyren (Backadammen) (© Emanuelsson et al. 2003, Fig. 36.4).

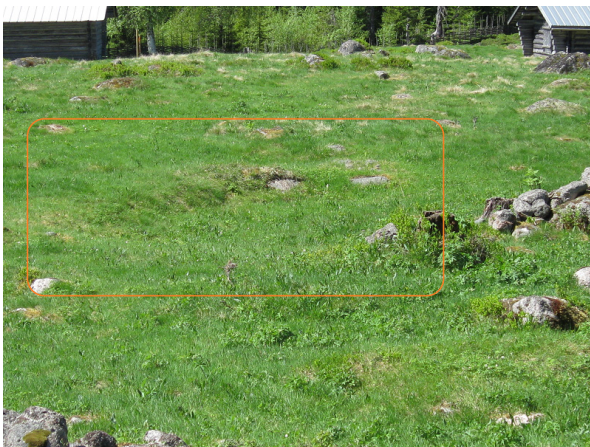


Fig. 5. House foundation with a cellar pit at Kårebolssättern. The dwelling houses at shielings were usually equipped with cellar pits for storage of the dairy products (© Eva Svensson).

So far, expansion of permanently settled farmsteads outside of the Klarälven river valley appears to have taken place first with the arrival of the migrant Forest Finns in the 17th century AD (Bladh 1995), and a bit later when it became common for non-proprietors to establish crofts in the forest (Torp i Dalby 1984).

Similar conditions, *i.e.* less-suitable agrarian land and a long distance to main settlements in the Klarälven river valley, characterise Kårebolssättern, located in the forested outlands by a lake. Kårebolssättern has been renovated and brought back into limited use as a shieling, including the

grazing of Scandinavian mountain cows, during the last couple of years. A detailed mapping of Kårebolssättern was conducted in the summer of 2018 by the author of this chapter and her colleagues. The detailed mapping revealed, among other things, older house foundations and fossil fields. None of the structures, however, gave an ancient impression, but were rather of types previously dated to the Late Middle Ages and early modern to modern times (Nilsson et al. 2018; Fig. 5).

The following winter a core was extracted from the nearby lake. The pollen analysis showed that already around AD, cultivation of barley and hemp or maybe hops (*cannabis*) was initiated at Kårebolssättern and – like at Backadammen – cereal cultivation was continuously practiced through time. Grazing does not become a dominant regime until c. AD 1300 after period of relative closure of Kårebolssättern c. AD 1000-1250 (Dögg Eddudóttir et al. 2021).

An excursion into the phenomenon of outland cereal cultivation – and (sometimes) settlement – in boreal inland Scandinavia

The existence of outland cereal cultivation and manured fields was identified in pollen analyses of other mires for hay making as part of the project ‘Settlement, shieling and landscape’. However, in these cases the signals for cereal pollen, mainly barley, were significantly weaker than in the pollen analysis of Stakällsmyren and Kårebolssättern.

Apart from two examples of minor, and short-lived, cereal cultivation around AD 400, cultivation took place in the Late Middle Ages and early modern times. Furthermore, it was preceded by grazing, which appeared as the main land use at the sites, with hay making becoming established in the High to Late Middle Ages or early modern times (Emanuelsson *et al.* 2003).

In spite of the presence of weeds in the pollen diagrams, bearing witness to the presence of tilled and manured fields, it was impossible to locate the actual fields in the outland despite intense and detailed survey. It was also noted, during the surveys, that there were hardly any good places for establishing fields for cultivation on the moraine. The same problem – the presence of cereal cultivation in pollen diagrams but lack of suitable soils and traceable remains of fields – occurs in other parts of boreal Scandinavia too (Solem 2005; Stene 2014). Still, people in medieval and early modern times were apparently able to locate pockets suitable for cultivation. It is now up to archaeologists to learn how to find the remains of their work.

Though it has been futile to locate fields in the outland for cereal cultivation in relation to positive attestations of cereal in pollen diagrams, other fields have been located in the outland. An example is found at Gammelvallen, a Forest Finnish farm established in the outlands west of the Klarälven river valley in the 17th century. Archaeological investigations, including detailed mapping, excavations, and pollen analyses of both a core from an adjacent mire and from the fields, show that the Forest Finnish farm was established on an older, deserted field for outland cereal cultivation. This field was dated to the late 13th or 14th century AD, and according to the pollen analyses barley had been cultivated (Myrdal -Runebjer - Bladh 1995; Wallin 1995). No contemporary settlement has been located next to the medieval field. However, the remains of such a settlement might be hard to trace through survey, or have been destroyed during the later Forest Finnish settlement.

Moving further west, and crossing the border into present-day Norway, there are some more spectacular examples of complex agriculture in the outland, *e.g.* the so-called Rødsmo terraces (named after the area where they were first discovered). In sandy moraine slopes, field terraces were created in the Iron Age, and possibly as early as the Bronze Age, with the practice continuing until the Middle Ages. The terraces were used for cultivating flax and rye. So far settlement connected to the field terraces has not been detected (Bergstøl – Sørensen 1997; Bergstøl 2008, 50–51). In addition, non-terraced outland fields used in the Iron Age, and later in the Middle Ages, have been documented in Norway. In the Middle Ages, the fields were definitely manured, indicating that grazing took place nearby. Although no settlement remains have been located, the researcher

Ingunn Holm (2007) considers it a possibility that the sites were farmsteads at some period.

In northeastern Sweden, in the province of Hälsningland and some adjacent areas, there was another kind of site, the so-called *bodland*. The *bodland* was an “extra” farmstead, located in the outlands at a distance from the mother farm, with houses, fields, meadows, and grazing land in the forested outlands. The whole peasant family moved out to the *bodland* during the summer season. But two farmsteads were not enough; the system also included shielings, so the shieling maids went on from the *bodland* further up to the shieling. The system of farm-*bodland*-shieling is known from early modern times in Hälsningland, but presumed to date back at least to the Late Middle Ages (Bodvall 1959). As there have been no archaeological or palaeobotanical investigations of historically identified *bodlands* to my knowledge, the assumed chronology of the *bodlands* has not been tested.

If again crossing the border to Norway, investigations in the mountain areas in southern Norway has shown that there were probably both permanent and seasonal settlements with cattle breeding and outland use in the in the first five centuries AD at sites often connected with historically known shielings. Land use could be complex, sometimes including cereal cultivation, and sometimes systems of pitfalls for reindeer, showing the importance of hunt (Stene 2015 with references).

It has been suggested that such mountain settlements in the Roman Iron Age and following Migration Period were part of a decentralised farmstructure, with a main farmstead in the lowlands and satellite settlements in the mountains used for several purposes such as hunting and grazing taking place during different seasons of the year (Kristoffersen 1993, 196–99). The suggested decentralised farmstructure would thus be something similar to the aforementioned *bodland* system (Bodvall 1959).

Resource colonisation – adding a component to the innovation package?

Backadammen and Kårebolssättern, according to the pollen analyses, differ from other investigated shielings in that cereal cultivation is prominent from their foundation in the Iron Age up to modern times, when both sites were used as shielings. There are also meadows and pastures connected to the sites. The land use at the sites is thus quite similar to that of a farmstead. Kårebolssättern and Backadammen are also the oldest of the sites historically known as shielings, and thus were in place at the time of the introduction of the innovation package of farmstead-shieling-outland use.

However, it is less likely that Backadammen and Kårebolssättern were farmsteads in the sense of a main farmstead in the innovation package. They are located far out in the outlands with little land suitable for

agriculture, and there was still plenty of space to establish new farmsteads and hamlets in the Klarälven river valley where there were far better conditions for agriculture. The lack of house foundations presumably contemporary with the early phases of land use at the two sites is another argument against a farmstead interpretation, though this might simply be a question of failure to detect such remains during the detailed mapping.

A possibility is that Backadammen and Kårebolssättern were fields for outland cereal cultivation. If so, they have been of a more stable character, more continuously and intensively used than other sites with outland cereal cultivation in the area, which appear more randomly and for shorter periods of time. The latter also belong to another temporal context, as they were introduced during the High and Late Middle Ages, as part of the expansion of the agrarian outland use following the collapse of the market for outland commodity production in the 13th century.

The early start, and the long-term and continuous nature, of cereal cultivation at Backadammen and Kårebolssättern make it more tempting to compare them with the aforementioned satellite settlements in a decentralised farm structure in the early resource-colonisation phases and the *bodlands* (Bodvall 1959). Such a comparison could be one line of inquiry for the continuation of the research, as well as the search for other similar sites and functions. Finding settlement remains dating to the 1st centuries AD would be a top priority.

Although we have data from only two sites, I would nevertheless suggest that we are dealing with an institutionalised rather than random or 'in times of need' practice, which can hypothetically be regarded as a component in the agrarian innovation package. Whether we are dealing with institutionalised outland cereal cultivation or satellite farmsteads in a decentralised farm system/*bodlands*, it is important to stress the entanglement, the interdependence, of the geographically spread-out components in the versatile, local economy. Shielings, and most likely also outland cereal cultivation, appear to have had special flexible and adaptable qualities, responding to changing external and internal conditions and changes in the other components in the package. Thus outland sites for cereal cultivation and/or satellite farmsteads in a decentralised farm system/*bodlands* could be transformed into shielings without much notice, or they could have been considered another kind of shieling all the time.

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