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The northern margin of cereal cultivation in Sweden during the Middle Ages

By Stig Welinder


One Medieval farm and one coeval summer farm in the Swedish province of Jämtland are discussed in the framework of a demographic and economic expansion from the regional introduction of agriculture in the early 3rd century until the agrarian crisis in the 14th and 15th centuries. The farm was deserted, while neighbouring farms specialising in iron production were not. The summer farm, on the other hand, was first used around the time of the crisis.

Households in Jämtland had a diversified economy including outland-production of goods for the European market, for example, squirrel and beaver furs, elk hides and iron bars. This provided flexibility for the households, allowing them to subsist on barley cropping in a marginal agricultural area, and thus surviving the Late Medieval agrarian crisis. They even increased their outland production of export commodities.

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Farmers think of themselves as living at the centre of the world with everyone else on the periphery. This is the subjective, inside view. From the outside, for example as viewed by a scholar, centre and margin may be described or defined from more or less objective criteria.

In this paper I deal with two archaeologically excavated sites in Jämtland province, a – from an agricultural point of view – marginal area in northern Scandinavia (fig. 1). One was a farm, whose main crop was barley and which was deserted in the 14th or 15th century during the Late Medieval agrarian crisis. The other was a summer farm (Sw. fäbod), which was established at about the same time. They both display flexibility in the subsistence economy of the area. I will emphasise change during the crisis.

Farms in middle Sweden, as in northern Scandinavia as a whole, were self-sufficient during the Medieval period. Nevertheless, the area was part of World Systems in trading vital goods to the European continent, such as dried fish from the northern Norwegian Atlantic coast and elk hides and squirrel furs from the forested interior of middle and northern Sweden. This view challenges the concepts of the central and marginal.

Expansion

Agriculture was introduced into Jämtland in the early 3rd century AD (Eriksson et al. 2011). From that time on the number of farms increased more or less exponentially. A tentative graph showing the expansion (fig. 2) is based on the number of excavated and dated graves up to around AD 1050. The number of tax-paying farms in 1568 was about 900, calculated from the tax lists drawn up by the Swedish Crown administration during its brief occupation of the area in the 1560s. Otherwise Jämtland belonged to the Danish-Norwegian kingdom up to 1645.
Fig. 1. The farm Eisåsen and the summer farm Munkbovallen in the province of Jämtland in middle Sweden. Drawing Marianne Ling.

Fig. 2. The tentative increase in the number of graves, and accordingly in population, in Jämtland during the Iron Age. Shaded area = Sami burials. After Magnusson 1986 and the archives of Jämtland County Museum, Ostersund.
The estimated number of farms in the early part of the 14th century, already around 900 farms judging from taxation lists, seems to be too low in comparison with the estimated number of deserted Medieval farms, numbering at a minimum of 600 farms, most of them actually recorded in the field. The dip in the graph in the 7th century may reflect a demographic disaster caused by cold climate due to the notorious AD 536 volcanic eruption and the Plague of Justinian.

In a detailed study of the parishes of Häggenås, Kyrkås and Lit (Olofsson 1997), the number of farms has been tentatively established from archaeological data:

<table>
<thead>
<tr>
<th>Century</th>
<th>Number</th>
</tr>
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<tbody>
<tr>
<td>6th</td>
<td>4</td>
</tr>
<tr>
<td>11th</td>
<td>11</td>
</tr>
<tr>
<td>14th</td>
<td>49</td>
</tr>
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</table>

The exponential increase is obvious, as it is from the number of radiocarbon-dated cultivation lynchets in all of Jämtland (Hansson et al. 2005). There are eight in the period 200–1200 cal AD, rising to 14 for the period 1200–1400.

Agrarian crisis

The immense settlement expansion towards the 14th century brought society into a state of stress. It became sensitive to change. The Black Death in the year 1350 caused catastrophic change and chaos (Myrdal 2003). There is no unambiguous written document stating that the plague actually hit Jämtland, but there is no reason to doubt it. One eloquent indicator is the subsequent merging of parishes due to a lack of both priests and parishioners (Ahnlund 1948). From an archaeological point of view the main indication is the impressive number of deserted farms, about 600–800, comprising about 50–60% of the number around 1300.

Dendrochronologically dated timber buildings offer quite an amazing insight into the agrarian crisis (Landström & Bartholin 1987; Raithle 1990). Most obvious in the adjoining province of Dalecarlia, but also hinted at in Jämtland, is the fact that structures were raised regularly during the first half of the 14th century. Then construction ceased entirely during the 1350s, after which nothing was built until about the 1460s. There was simply no need for new buildings, nor the manpower to build them. However, many farms in Jämtland seem to have remained inhabited until after 1400 (Ahnlund 1948). A suggested explanation for this late date of desertion is that the first waves of the plague were not as severe in Jämtland as the later ones. Olof Holm (2011) has challenged the established view and suggested that the main desertion wave began already in the 14th century.

In the study of three parishes referred to above, 37% of the 49 farms were deserted, which is less than in most of Jämtland. In the highland part of the area, the percentage is 44%, and in the valley partly along a river, it is only 26%. This difference seems reasonable, but it is not typical for all of Jämtland.

Out of the total number of deserted farms, 72% were less than 1.5 km from a farm that survived the crisis; 46% shared fences with a surviving farm (Hansson et al. 2005). Thus, farms in good farming areas were deserted as often as farms in poor areas.

Jämtland recovered later from the crisis than most parts of Scandinavia (Salvesen 1979). The reason was that the farmers of the province preferred to use the land of the deserted farms for grazing and hay making, not for reestablishing the deserted farms for daughters or sons. Some deserted farms became summer farms.

The deserted farm Eisåsen is typical of the pattern outlined above, although it deviates somewhat in being 2.5 km from a surviving farm (fig. 3).

The deserted farm Eisåsen

Eisåsen is in Berg parish, some kilometres to the south of Lake Storsjön and the good farming land on its shores (Hansson et al. 2005). The farm site is close to a small lake, well suited for pollen analysis, at an elevation of 480–500 m above sea level (figs 1, 3).

1st millennium farming settlements are indicated by burial mounds and stray finds around Lake Storsjön. Slag indicates bloomery iron production (fig. 3). The birth date of this settlement area is unknown, but it certainly predates the 11th century, when Christianity became established in Jämtland. At the same time the area around Eis-
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äsen was used for cattle grazing in a mainly forested environment. Land use intensified around the 9th century (tab. 1). Meadows were created, and arable land was cleared from stones and ploughed. No house foundations are as yet known from this time. The land was used as outland by the farms at Lake Storsjön.

During the expansion stage described above, farms and villages were created, thus turning the former outland partly into infields. Eisåsen was one of the farms established in the 13th century. A house with two rooms has been excavated. Other buildings, including a cowshed, are not visible above ground. Barley was grown at the farm. A stock of cows produced milk; calves were slaughtered regularly at an age of less than three years, most often two years or less.

The farm owned a pitfall system for hunting, or at least a share in one. A spearhead typical for pitfalls was found in the waste around the house. Elk bones, however, make up only about 12% of the mammal bones in the garbage of the Eisåsen household. Bones of beaver and squirrel indicate trapping for furs. The farm was linked into the above-mentioned long-distance trading system. A further indication is the presence of a sherd of Siegburg stoneware at another deserted farm in Jämtland, also at a distance from the farming area around Lake Storsjön (Gauffin 1981). Fishing and fowling, indicated by a few bones each, were more likely part of the self-sufficient subsistence economy.

The Eisåsen farm was, according to radiocarbon, deserted in the 15th century, that is, during one of the recurring plague waves following the Black Death or during the chaos created by that first catastrophic pandemic. In the area shown in fig. 3, there were eleven farms or small villages during the 13th century. Out of these, six were deserted, or 55%, a percentage which may be typical of Jämtland as a whole.

Note that the farms that survived the crisis were all engaged in iron production, while the deserted ones were not (fig. 3). This small-scale iron production was obviously profitable, although large-scale production in blast furnaces was well under way in the iron producing district of Bergslagen further to the south (Magnusson 1984; 2001).

Fig. 3. The landscape with the Eisåsen farm to the south of Lake Storsjön, the central lake in Jämtland surrounded by farming land. Black squares = burial mounds and other sites from the 1st millennium. Black triangles = iron production sites, mostly finds of slag. Open squares = Medieval farms or villages. Open circles = deserted Medieval farms. After Hansson et al. 2005.
In the wake of the crisis, Eisåsen was turned into meadows and hay producing land and used by the farmers in the surviving small village of Bingsta (fig. 3). Eventually it was turned into a summer farm called Eisåsvalen, which in turn was abandoned around 1875 when the cows decided to go home to the village instead of to the cowshed at the summer farm.

**The summer farm Munkbovallen**

At the time of its abandonment in the mid-19th century, Munkbovallen consisted of four small cottages with large fireplaces for making whey cheese (Sw. *mese*), five cellars and at least one cowshed. The summer farm had looked like this since the 17th century, when its owners began to grow barley (Olofsson et al. 2007; Eriksson et al. 2011). This is a typical central Swedish *fäbod*, where butter, cheese, and whey cheese were made during the summer months (Larsson 2009). From the 18th century on the butter may have been eaten at five o’clock tea in England.

Munkbovallen is at an elevation of 600–700 m above sea level (fig. 4), close to a small bog in the Ovikén mountains. The evidence for cereal cultivation at this altitude during the Little Ice Age is remarkable. Seasonal grazing of cows and goats, however, began already in the 14th century (tab. 1). The date based on the radiocarbon dates of a pollen diagram is somewhat uncertain. The contemporaneity with the abandonment of many farms in Jämtland is, however, remarkable.

The closest summer farm to Munkbovallen is Västnorbodarna, half an hour’s walk away. The landscape history around that fäbod is quite different (Eriksson et al. 2011). Some forest clearance and grazing began already in the 3rd century, at the time when agriculture was introduced into Jämtland. Activity intensified in the 10th century, including some barley cultivation. The

<table>
<thead>
<tr>
<th>Munkbovallen</th>
<th>Eisåsen</th>
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<tbody>
<tr>
<td>Abandoned c. 1850</td>
<td>Abandoned c. 1875</td>
</tr>
<tr>
<td>Summer farm (1) with arable land</td>
<td>Summer farm (1)</td>
</tr>
<tr>
<td>Pasture, barley cultivation</td>
<td>Pasture, hay-making, possibly barley cultivation</td>
</tr>
<tr>
<td>Summer farm with an <em>eldhus</em> (2)</td>
<td>Tax-paying farm c. 1250–1450</td>
</tr>
<tr>
<td>Forest clearance, pasture</td>
<td>Pasture, hay-making, barley cultivation</td>
</tr>
<tr>
<td></td>
<td>Forest clearance</td>
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<tr>
<td></td>
<td>Forest grazing</td>
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<td></td>
<td>BC/AD</td>
</tr>
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</table>

Tab. 1. Long-term landscape change at the deserted farm Eisåsen and the summer farm Munkbovallen. After Hansson et al. 2005; Eriksson et al. 2011. 1) Sw. *fäbod*; used for the cattle and for dairy production in the outland during the summer season. 2) A small cottage with a central fireplace below a hole in the roof.
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The northern margin of cereal cultivation …

Site was turned into a regular summer farm with arable land in the 18th century, somewhat later than Munkbovallen. The site was in continuous use throughout the agrarian crisis.

Thus, the agrarian crisis is visible, or not, in quite different ways at the summer farm area in the Oviken high mountains from the farming area around the Eissaen farm. No abandonment took place; rather, the opposite.

Conclusions
During the Early Modern Period Jämtland’s forbönder (travelling trader-farmers, fig. 5) were well known. In the winters they went by horse and sleigh to markets on the Norwegian coast or south to markets in Falun and Uppsala, to name a few places (Brink 1995). They transported and sold butter, hides, iron bars, furs, and handicraft products like barrels and caskets. Finds at the deserted farm sites indicate a similar economy for the Medieval period and indeed from the later 1st millennium. Sleighs, scales, and exotic trading goods have been found in burial mounds from the 10th and 11th centuries (Kjellmark 1904; 1910–13).

The products traded by Jämtland’s forbönder came mainly from the outland in the forest and mountain areas. Diversity in the subsistence economy paid off, not least during the Late Medieval crisis as demonstrated by the farms in the Eissaen area (fig. 3). In the outland, the crisis meant change, not decline (Berglund et al. 2009). This is demonstrated in the Munkbovallen area, where an increase in cattle breeding is visible (tab. 1). Trade went on as usual. The farmers of Jämtland were agents in the northern European trading systems both during and after the crisis of the 14th and 15th centuries.

Cereal cultivation, specifically barley, was a minor part of the subsistence economy in this northerly area at high altitudes. Possibly the forbönder even brought barley home from their trade expeditions to have some left for brewing Christmas beer. Seen from this agricultural perspective, Jämtland, and indeed all of northern Scandinavia, were marginal areas.

Jämtland’s households survived on the edge, where agriculture was almost impossible, thanks to a diversified economy emphasising outland production – and merging the northern European trading systems. The flexibility of this eco-

Fig. 4. The landscape view from the Munkbovallen summer farm in Berg parish, in the province of Jämtland, Sweden. Photo: P.G. Bengtsson.
nom y allo w ed some of these households on the European margin for barley cultivation to survive crises. The outland shows no signs of abandonment or decline during the Late Medieval crisis, rather the opposite (Berglund et al. 2009).

English corrected by Carole Gillis.

References

