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## THE LONG HISTORY OF SWEDISH BREAD

### Continuity and change in Swedish regional bread-cereal traditions

The beginnings of the Swedish regional bread-cereal traditions, described in Åke Campbell's 1950 survey "The Swedish bread", are studied, and the causes for change and continuity in cereal usage are discussed. Archaeobotanical evidence from ten archaeological sites dating to the Iron Age and Middle Ages, in northern, central and southern Sweden, forms the basis of the study. The results suggest different ages for the bread-cereal traditions in these regions. In the discussion of change or stability in the usage of different cereals, cultural influences are emphasized

#### Introduction

During the 1970s, Swedish ethnological research on food and dietary patterns changed and was partially reorientated. Previous research had been dominated by regional surveys of food habits in pre-industrial Sweden, now food was seen as a symbol and was used as a means of studying cultural traditions. This new direction is based on ideas of eating as being not only a necessary consumption of nutrients, but also a way of expressing cultural identity. How and what we eat depends on such variables as ethnicity, nationality and the social and economic situation. Studying food usage and meal patterns may thus provide information on individuals and their relationship with the outside world (Salomonsson 1987:9–14). Food habits form a part of our cultural heritage and are not readily changed. From the USA, there are records of traditional food and meals being kept up by third and fourth generation immigrants who have long ago given up their original languages (Bringeus 1988:14).

Our daily bread is one of the most tradition-bound components of the regular meals. We usually eat bread every day and generally the type of bread we have always had. For example the French and the Italians are associated with white wheaten bread, Finns and Russians with rye bread etc., although in many countries even different regions have their own typical bread. In Sweden today a significant proportion of the bread supply is produced in a couple of factories with a nationwide distributional network. Nonetheless, regional differences in bread consumption can be discerned. Nowhere else do the local

shops provide such a variety of thin crisp bread (Sw. *hårt tunnbröd*) as in northern Sweden, whereas it is said to be difficult to sell any crisp bread at all in Scania, yet easy to sell soft loaves baked from rye (Kurt Genrup, pers. comm.).

#### The Swedish bread traditions viewed on a long term perspective

Inspired by the new thinking about food as a symbol, I found it interesting to study the roots of the Swedish bread tradition in different regions and to discuss the possible causes for both continuity and change in the cereals used to make bread in traditional ways. My starting point was the survey made in 1950 by the Swedish ethnologist Åke Campbell: *The Swedish Bread*. This study, based mainly on records from interviews, reflects the bread traditions prevailing among Swedish peasants in the 1880s (fig. 1). By studying the rather meagre literary and archaeological records, Campbell was also able to provide a tentative outline of the early historic and pre-historic bread traditions in the country. He came to the conclusion that the traditions of the 1880s had sprung from medieval times, when a leavened bread baked in proper ovens and able to be stored for some time, started to appear. Before that time, people would have eaten only fresh-made, thin, flat bread, baked daily on the fire.

#### The study basis – primarily the cereals used

Since 1950, a lot of fresh literary as well as archaeological and archaeobotanical evidence on bread and on cer-



Fig. 1. The different kinds of bread baked in Sweden in the 1880s. After Campbell 1950, p. 207.

eal cultivation has been published. medieval laws and lists of taxes and tithes from early historical times have been presented by economic historians (Myrdal 1985; Myrdal & Söderberg 1991). The archaeobotanical record includes analyses of prehistoric finds of bread (Hjelmqvist 1984; 1990; Hansson 1981; 1984), and imprints of seeds and grains in pottery as well as plant remains, usually preserved by charring, obtained from archaeological investigations by flotation of soil samples from prehistoric houses. Burnt cereal grains are often found near the hearths, or scattered about the house, or as larger deposits of stored grain (fig. 2). In the first case, the grains may have been spilled during grinding and when cooking near the hot fire, in the two latter cases a house fire is the most probable cause of charring.

The different cereals are processed and prepared for consumption in much the same manner. Their caryopses have about the same size, shape and chemical content and therefore presumably stand the same chances of becoming preserved and retrieved by the archaeologists. Con-



Fig. 2. Charred barley grains from Arnäsbacken, Ångermanland, Late Iron Age.

sequently the proportional representation of the different cereals in an archaeobotanical assemblage at a site should, at least roughly, reflect the proportions at which they were once cultivated and used (Engelmark & Viklund 1990).

Apart from bread, cereals were also used for making porridge, gruel and beer etc., later on also as animal fodder and for trade, but I assume that in early historic and late prehistoric times a major part of the cereal crop was intended for bread-making. Thus my study is based mainly on historical records of cereal cultivation and on the finds of prehistoric fossil cereal grains. However, the rather exceptional Swedish finds of prehistoric bread play an important role.

### Swedish prehistoric bread

Approximately at least 100 finds of charred and preserved prehistoric bread have been made in Sweden. Most of the bread was found in graves dated to the Iron Age. Birka and Helgö are two of the sites in central Sweden which have yielded quite a lot of bread (fig. 3). Most of it is rather small, thin and biscuit-like. It was probably not baked in ovens: such structures are rarely found before the Late Iron Age, when they start to appear in Scania, probably due to the increasing cultivation of wheat and rye, from which leavened oven-baked bread can be made. In the absence of ovens only a flat unleavened bread could have been made, using griddle-like utensils made of iron, clay or stone, or on specially-designed clay hearths. The archaeological finds and structures imply the use of such practices (Viklund 1992a and lit. cited there).

### The cereals used in prehistoric bread

Quite a large proportion of the Swedish prehistoric bread finds have been analysed for their cereal content. Most of the analyses have been made by Hakon Hjelmqvist, Lund

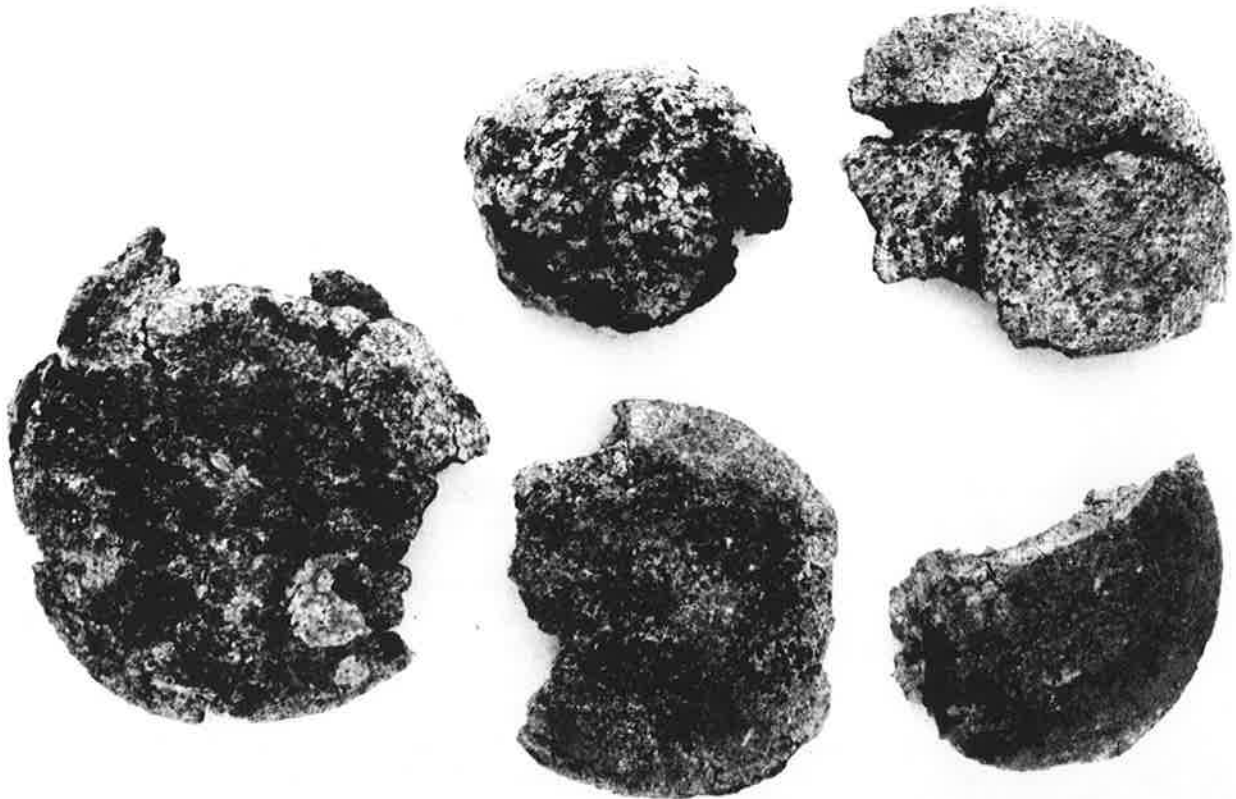


Fig. 3. Charred bread from Helgö. Photo: ATA.

and Ann-Marie Hansson, the Archaeological Research Laboratory in Stockholm. When well preserved, the different kinds of cereals can be identified from the cell-patterns of the glume epidermis and the grain walls. Fig. 4 shows the representation of the different kinds of cereals and other cultivated plants identified in bread finds from Birka and Helgö and from 30 other Iron Age sites (most of which are *Late Iron Age* sites in *central Sweden*). Very little of this bread was baked using only one kind of cereal. Usually at least two different cultivated plants were identified in each specimen. Barley was found in almost all of the bread finds. Most of the bread from Helgö contained either barley or oats, or both together. This bread dates from the third century AD and was probably intended to be eaten since it was found in the habitation area. Nearly all the other finds, including the ones from Birka, come from cremation graves dated to the Late Iron Age (600–1050 AD), where one supposes that they formed part of the burial ritual. Bread wheat and rye are also present, as well as oats and barley, at these sites.

#### Prehistoric bread in other parts of Sweden?

As stated above, almost all the finds of prehistoric bread come from central Sweden. The majority of those analysed derived from the area around Lake Mälaren. What type of bread was eaten in the rest of Sweden? And is the bread found in relation to a burial something very special or is it just an ordinary bread type representative of the local everyday diet?

The question of representativity may be answered by comparing the relative occurrence of the different cereals in the bread *and* in the archaeobotanical material derived from the same site or area. From Birka there are also pottery sherds bearing imprints of cereal grains (Hjelmqvist 1960:149). Among a total of 71 of such imprints more than half are from barley grains, 16 from bread wheat and 5 each from rye and oats respectively, i.e. roughly the same representation as in the bread finds from Birka (fig. 4). When a larger body of material is examined; five sites from the Early, and five sites from the Late Iron Age in eastern central Sweden, a similar picture emerges (fig. 5b). Barley and oats are recorded at all ten sites and bread wheat represents a significant part (fig. 6b).

It thus would seem that the proportional usage of the different cereals in the bread finds from the graves corresponds roughly to the proportions in which they were cultivated and used in cookery at the Iron Age sites. Consequently, the fossil evidence from the cereal finds from the archaeological sites should provide a reliable indication of regional prehistoric bread traditions also beyond the Mälaren area.

Charred cereal grains and impressions of grains have been found in all parts of Sweden although in some regions still only on a small scale. Apart from eastern central Sweden, it is possible to present archaeobotanical evidence from five sites from the Early, and five sites from the Late Iron Age/medieval period, also from southern and northern Sweden. Presence and proportional representation of cultivated plants at these sites is

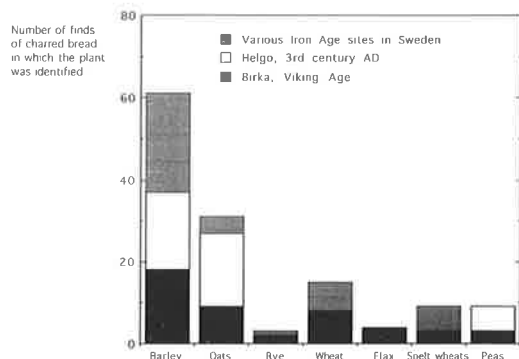


Fig. 4. Cereals and other cultivated plants identified in charred bread from Birka (28 finds altogether), Helgö (20 finds) and various Iron Age sites in Sweden (30 sites and finds). From Hjelmqvist 1984; 1990.

presented in figs. 5 and 6. To trace the roots and development of the Swedish regional bread traditions, I have collated the information from this archaeobotanical material from northern, central and southern Sweden, the written documents from the Middle Ages and later, and Campbell's account of the Swedish regional bread traditions in the 1880s.

### Central Sweden

As seen above, barley was by far the most common cereal, and rye was recorded only sporadically from this area in the Iron Age. Rye has been identified in only three of the around eighty specimens of Iron Age bread that have been analysed (fig. 4). Up to the present there have been no prehistoric storage finds of rye here, but a slight increase of rye during the Late Iron Age may be discerned in the archaeobotanical material from different sites in this region (figs. 5b, 6b). In the 19th century, however, the most common type of bread was baked from rye. Barley is recorded from only a few places in Uppland (fig. 1). This rye-bread tradition obviously did not start in the Iron Age. How old is it then?

The medieval sources indicate that rye gained in importance during the 14th and 15th centuries, making up around 20–30% of the cereal harvest in east central Sweden (Myrdal 1985:69). During the 16th century rye became increasingly important accounting for 30–50% of the harvest in the 1550s, and around 1600 rye was the most common cereal cultivated in Uppland and Södermanland (Myrdal & Söderberg 1992:78–79, 123–124). The conclusion would seem to be that the rye-bread tradition in this region became established in late medieval times.

### Southern Sweden

According to Campbell, the people in the southernmost part of Sweden had loaves made from rye and baked in ovens in the 1880s. In northern Scania barley bread was also eaten (fig. 1). The same type of rye bread is recorded

from the 16th and 17th centuries and at the end of the Middle Ages this was the most common type of bread (Campbell 1950:75). In this respect medieval Scania, then a province of Denmark, belonged to the rye-bread zone which extended from France in the south, to Denmark in the north (Myrdal 1985:70). According to the archaeobotanical evidence, this type of bread was probably introduced into Scania in the Late Iron Age–Early Middle Ages, since at that time there was a marked increase in the evidence for rye cultivation compared to the Early Iron Age (figs. 5c, 6c).

During the Early Iron Age barley was the predominant crop. This type of barley, hulled barley, was introduced to Scania during the Late Bronze Age, before that time other cereals were cultivated here as well as in other parts of Sweden. The southern Swedish rye-bread tradition can evidently be traced back to the Late Iron Age. During preceding centuries in the Iron Age, the people in Scania, too, probably had bread in which barley was the predominant cereal.

### Northern Sweden

Campbell recorded sporadic usage of rye, and barley as the predominant cereal in this region in the 1880s (fig. 1). The barley bread was flat and very thin and baked on

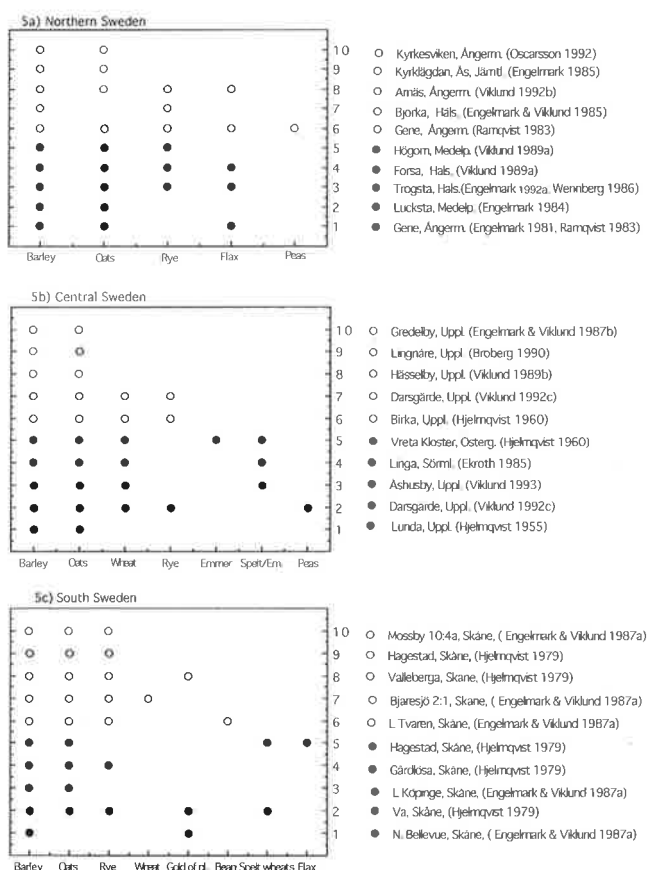


Fig. 5. The representation of cultivated plants at five archaeological sites from the Early (●) and five from the Late Iron Age/Middle Ages (○).

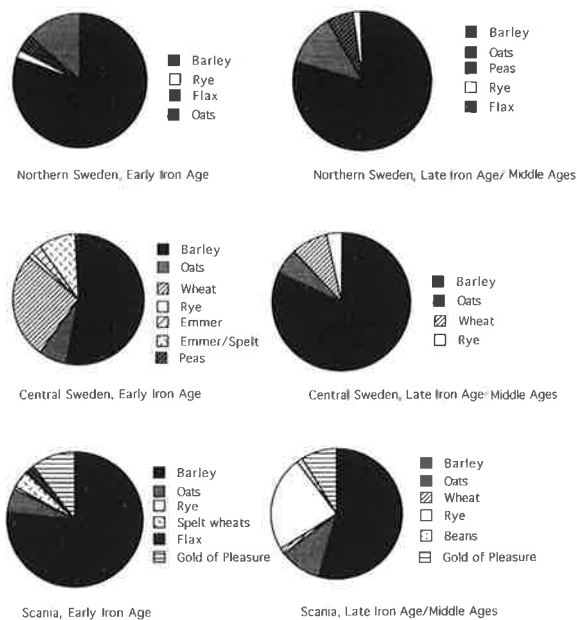


Fig. 6. The proportional representation of cultivated plants at five archaeological sites from the Early and five from the Late Iron Age/Middle Ages.

open hearths or in ovens. Around the year 1600, too, barley was the most common cereal cultivated in north Sweden (Myrdal & Söderberg 1992:80). Rye was not cultivated in this region during the 16th century, and the medieval provincial laws (*Hälsingelagen*) do not mention rye (Myrdal 1985:65–66).

In the Late Iron Age and in medieval times, barley was the predominant cereal according to the archaeobotanical material from five sites (figs. 5a, 6a). Barley is recorded from all these sites, on average forming about 80% of the total number of seeds derived from cultivated plants. Oats were also found at many sites but only in small amounts. Flax and peas were also identified and, as at Birka, both of these may also have been used in bread-making. In the Early Iron Age, the situation is much the same. The suggestion is therefore that the barley bread tradition of the late 19th century had become established already in the Iron Age in northern Sweden.

### Continuity and change in food patterns – causes and effects

My study of the regional differences in cereal usage in Sweden has yielded evidence for different ages for the regional bread-cereal traditions in 19th century Sweden. From the Late Bronze Age up to the Late Iron Age, hulled barley was the predominant crop over most of the country. The bread baked during this era was presumably a thin, flat bread, perhaps freshly baked every day on an open fire, as Campbell suggests.

Up to now, archaeological investigations have yielded no indications of bread storage in any quantity in Iron Age houses in Sweden. In the Late Iron Age, rye bread was probably introduced to southern Sweden, whereas

barley bread was still eaten in central and northern Sweden. Not until the late Middle Ages did rye become an important crop in central Sweden, and in northern Sweden rye bread never replaced the old barley bread.

What can the explanation be for a 1000 year-old tradition over the whole country being supplanted in one region in the Late Iron Age, kept up for a further 500 years in another, and for 500 years longer still in a third? Changes within the agrarian economy are often discussed from the point of view of climatic or other environmental causes. All too often, less plausible monocausal explanations singling out one triggering effect are offered. The role of the individual and of cultural traditions are often underestimated, and it is frequently forgotten that agro-technical innovations have often come as package solutions which bring about almost simultaneous change in tools, crops and methods as well as in ideas and ends.

### The introduction of rye

The increase in the cultivation of rye during the past millennium has frequently been explained on the grounds that cultivation of rye was more rewarding than that of other cereals; rye is said to give acceptable yields also on low grade soils, it is not susceptible to damages by frost and low temperature during the growing season, etc. However, such criteria make it difficult to understand why rye was first cultivated in the region which still enjoys the best climatic and edaphic conditions for cereal cultivation in the whole country.

The fact that rye, being an autumn-sown crop, was an important component in both the three-field and two-field-rotation systems that started to replace the traditional permanent fields in northern Europe during the first millennium AD, is probably more important. The advantages of these cultivation systems were a reduction in the need for manure. In the three-field rotation system only one third of the field area was manured each year (Engelmark 1992b:373–374). This made it possible to keep the same number of livestock even though new fields were brought under the plough. The expansion in rye cultivation might therefore be related to increasing demographic pressure and the demand for arable land, situations which may have occurred in Scania during the Viking Age and in central Sweden during the next centuries.

Cultural influences must also be taken into account in both regions. Lying close to Denmark, where rye cultivation seems already to have started around 500 AD (Steen Henriksen 1992:5), it would seem quite natural that the Scansians would soon adopt the new cultivation techniques – which were perhaps also forcibly imposed upon the farmers by the Danish supremacy. (There are archaeobotanical indications of rye being cultivated already in the Early Iron Age also on Öland and Gotland, but very few sites on these islands have as yet been sampled for plant remains.) In the area around Mälaren and

Stockholm, cultural influences from immigrants coming from the south and east on the continent of Europe, and from Finland, may have resulted in rye becoming increasingly important during the 13–16th centuries. Myrdal has noted a sudden increase in the import of rye to the castle of Nyköpingshus in the 1360s, when German mercenaries were quartered there (Myrdal 1985:69–70) and Campbell has pointed out the influential proportion of German citizens present in the early towns in Sweden, especially in the ports, during medieval times and later (Campbell 1950:50).

### Retention of the old barley bread in the north

The preservation of the traditional, thin, flat barley bread in northern Sweden can be partly explained in terms of the environment. Barley is undoubtedly the most suitable crop for the soils and the climate here. However, both rye and oats can produce satisfactory yields in Norrland. Still a change-over to crop-rotation systems or a new major crop never took place here.

During historical times, foreign feudal lords, mercenaries, experts in the mining and iron-making industry, public officials etc., never settled in Norrland in such numbers as they did in other parts of Sweden. Farms were small and privately owned and agriculture was based on stock-raising and milk-products rather than on cereal production. Any demand for more arable land to support an increasing population, e.g. in the Viking Age and early Middle Ages, and in the 17th and 18th centuries, were solved by settlement of new land, especially in the western and northern parts of Norrland. On all these new settlements, despite desperate soil conditions and climate in many places, new ground was broken up, and the cereal sown in these fields was barley. The small fields sometimes yielded a very insignificant contribution to the overall food supply, obviously their role was primarily symbolic. It seems that they were the means by which the settler's identity as a farmer was established, i.e. what made him a farmer vis-a-vis the hunters, fishers or Lapps living around him. As a consequence, the role of barley and of thin, flat, barley bread became consolidated in northern Sweden.

### Conclusions

On the whole, Campbell's 1950 survey of the development of the regional types of bread in Sweden stands up to the findings of subsequent research. Archaeobotanical material from the last ten years has filled out a few gaps concerning the cereals of the later prehistoric periods. The thin, flat, barley bread of northern Sweden could be said to have originated in cereal traditions in the Iron Age, the Scanian rye-bread tradition probably became established during the Viking Age, and in central Sweden rye bread gradually gained ground during the past 500 years.

The change or stability in the traditions of bread-making, like other dietary habits, can be interpreted from the points of view of cultural tradition and identity. Since the objective of cereal cultivation was to provide food for people, changes or continuity in cereal cultivation, e.g. the adoption of a new type of cereal, must be discussed from the same points of view. Environmental conditions may also be important, especially as limiting factors, as well as lines of communication, and the local economic, social and political situations.

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