A Major Burial Ground Discovered at Fjälkinge Reflections of Life in a Scanian Viking Village

BY BERTIL HELGESSON AND CAROLINE ARCINI

Abstract

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This paper deals with the most important results from the excavation of a part of a large burial ground in Fjälkinge, a village in southern Sweden, which uncovered 121 graves dated to the late Viking Age and the early Middle Ages or AD 900–1050, approximately. The burial ground was in use during the transition period between pagan and Christian burial customs, as indicated by differences as regards grave goods and skeleton orientation. More than 60% of the graves contained the well preserved skeletons of small children including many infants. In addition, the age and sex distribution of the adult individuals is also aberrant, probably explained by the excavated area just being a part of a much larger burial ground and possibly by different age groups and/or social groups being buried separately. Some of the graves have special features which give us some insight into the beliefs and the social life of a Viking village community. Many individuals in Fjälkinge at that time suffered from chronic diseases, some of them severe, as is apparent from their skeletal changes. Nevertheless, especially the women became quite old. In many ways our findings contradict the traditional picture of Vikings as strong, magnificent and ruthless.

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Introduction

Some periods during prehistoric and historic times tend to be perceived as transition periods during which something old is left behind and something new is introduced. Perhaps the most discussed period in Scandinavian archaeology is the transition between the late Viking Age and the early Middle Ages, and this is the traditional borderland between prehistory and history in this part of Europe. The older social order was based on family and pagan religion. The Middle Ages saw the formation of the state and the introduction of Christianity.

During the summer of 1990 an archaeological rescue excavation was carried out in Fjälkinge, lot 35:60, Fjälkinge parish, Scania (Fig. 1), with findings revealing new aspects of society, religion and people in Scania about a thousand years ago. Only the sum of findings, recently made in four smaller burial grounds from the same period of time on the Danish island of Langeland may be compared with the present ones made in a single excavation site. However, at Fjälkinge preservation conditions for skeletons have been close to ideal, allowing, among other things, much more

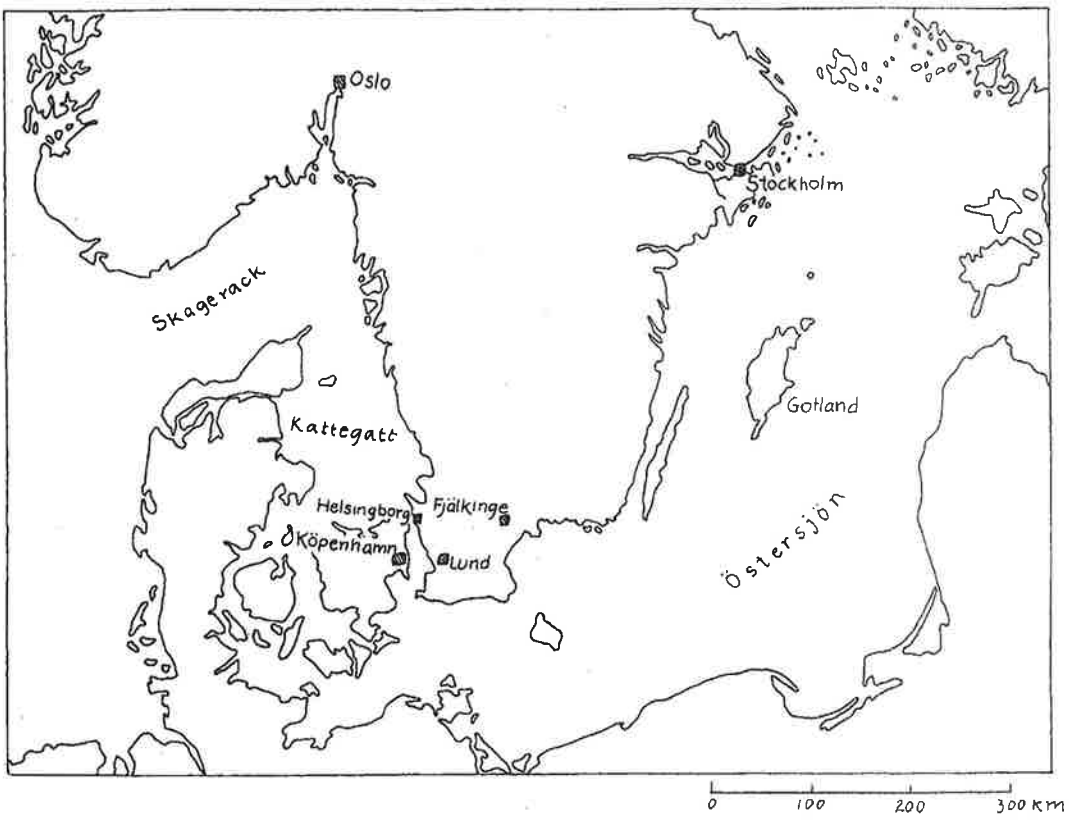

Fig. 1. The Baltic area with the position of some major towns and Fjälkinge. Map by Monica Centervall.

detailed palaeopathological studies.

The excavation site

Our excavation was carried out in an area of about 7,000 square metres, and the most spectacular finding was that this excavated area apparently is a part of a large Viking Age burial ground, situated on a sandy drumlin, in itself having a surface area of 13 hectares suitable for the purpose. To the north and east the excavated area is delimited by wetlands, and to the south by a slope and a Viking Age settlement (Helgesson 1996, pp. 2 f.), but to the west there are no obvious delimitations.

The excavation uncovered 121 graves (Fig. 2) containing the skeletons of 128 individuals, 24 men, 24 women and 80 children (Helgesson 1996, p. 6). All the skeletons were unburnt, and they were very well preserved. The burial ground has been approximately dated to AD 900–1050 (Helgesson 1996, p. 12), for one thing based on bronze jewellery and glass beads in many of the graves (Helgesson 1996, pp. 9 ff.) but also based on the fact that a large group of graves with body orientation according to Christian burial custom of that time (Brothwell 1981) were devoid of grave goods (Helgesson 1996, p. 12) in combination with findings of datable coins close to the excavated area (Helgesson 1996, p. 3).

Body orientation could be determined in 121 cases (Fig. 3). In about 50% and 40% of these, the skulls were found generally oriented to the north-north-east or north and to the west-north-west or west, respectively. The apparent

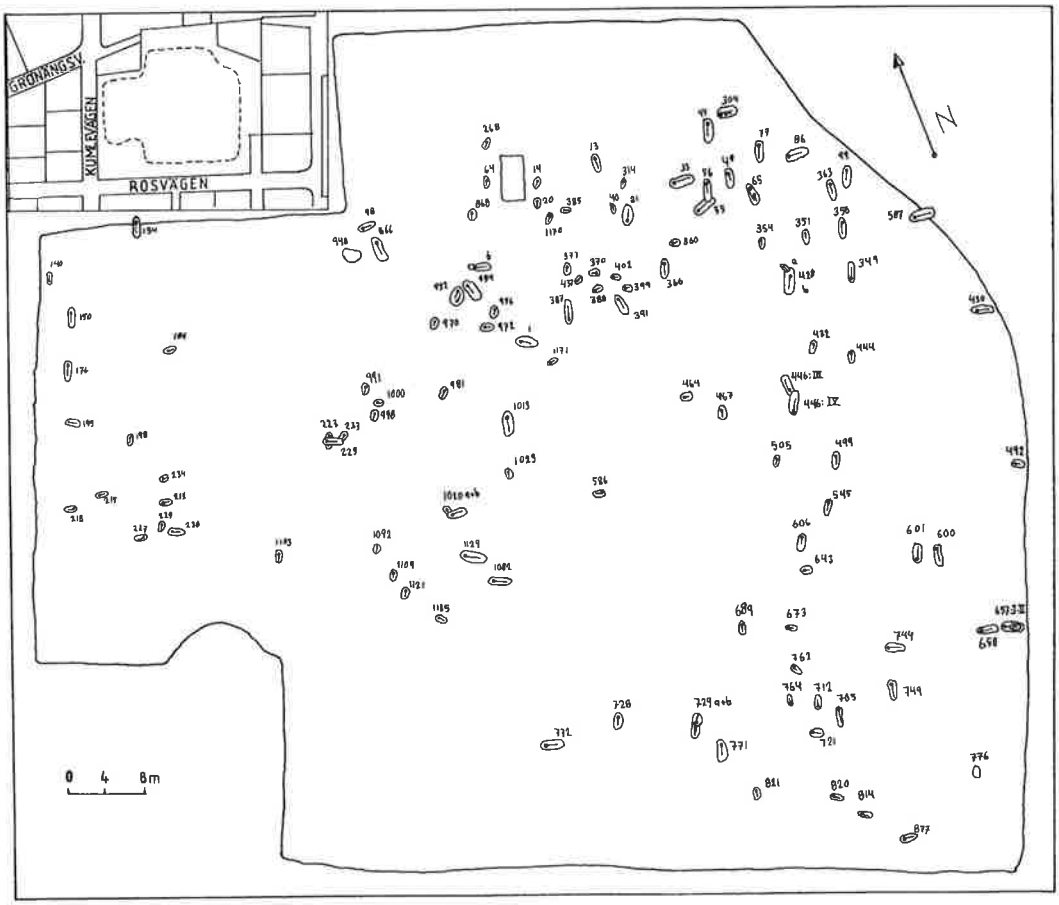

Fig. 2. The Fjälkinge burial ground. Drawing by Jimmy Juhlin.

clockwise disorientation in both groups of graves may be related to "Fjälkinge backe", an impressive ridge of primary rocks, situated about 1,500 metres north-north-east of the burial ground, and apparently also influencing the local population when building the medieval church and laying out the first streets in Fjälkinge. In the first group of graves the deceased were often buried in wooden coffins and rather deep below the surface, adults on their backs and children on one or the other side (Helgesson 1996, app. 1, pp. 1 ff.), and supplied with grave goods, typically an iron knife for adults and an earthenware vessel for children (Helgesson 1996, pp. 8 f.). Most of the graves of the second group were shallow and devoid of coffin and grave goods, adults as well as children being buried on their backs (Helgesson 1996, app. 1, pp. 1 ff.).

About 10% of the graves appear to represent the transition between the two groups already mentioned, comprising graves combining body orientation with the skull to the north-west with the presence or absence of grave goods, but also those graves where body orientation with the skull to the west is combined with the presence of grave goods (Helgesson 1996, app. 1, pp. 1 ff.). An important example in this group is grave 212, combining its Christian skeletal orientation (Brothwell 1981) with the presence of grave goods consisting of three beads and an

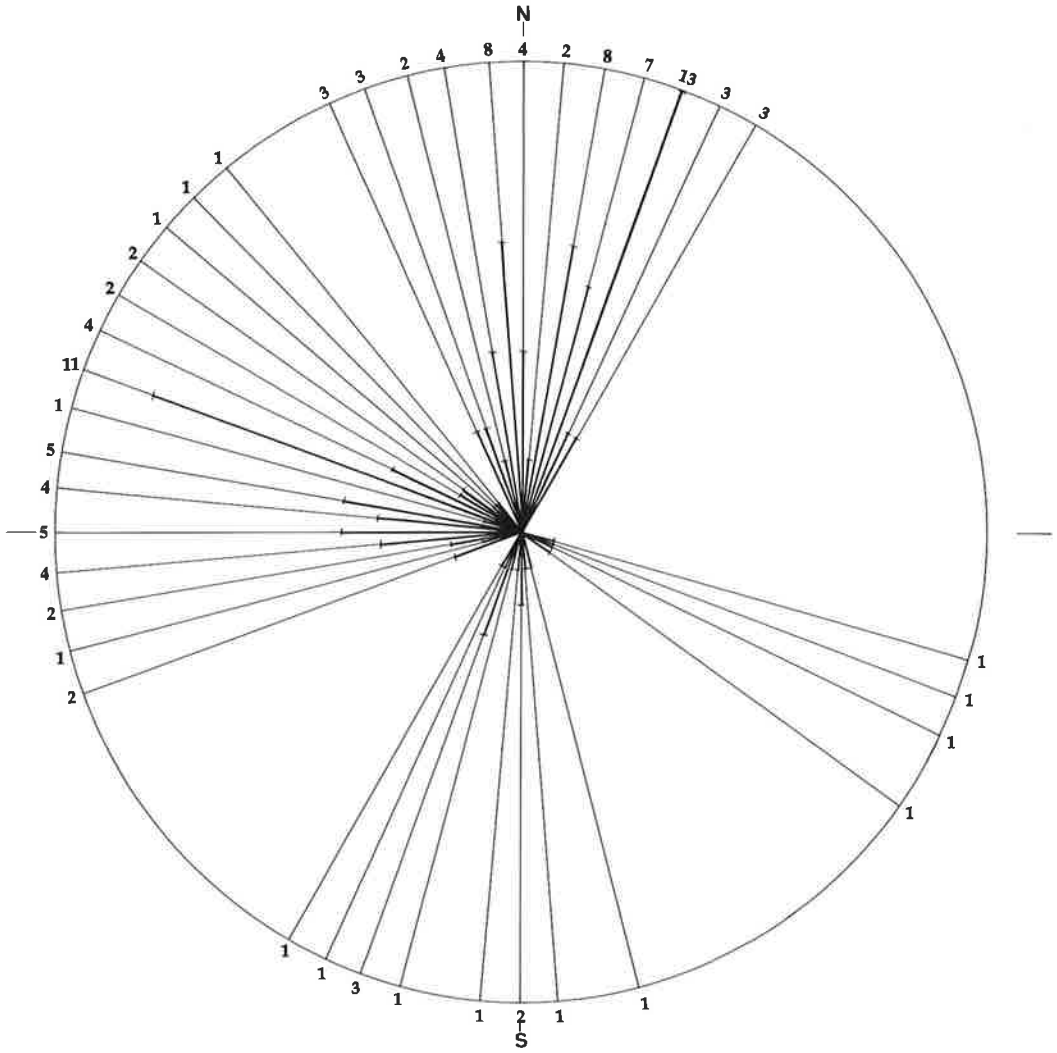

Fig. 3. Body orientations (according to the position of the skull). Drawing by Ann-Christin Åkesson.

earthenware vessel (Helgesson 1996, app. 1, p. 8). Two of the beads are of a type extremely unusual before the end of the 10th century (Helgesson 1996, p. 10).

Aberrant age distributions of children and adults

Three groups of individuals dominate the demographic picture, young children, middle-aged men and old women, but it is noteworthy that the skeletons within the excavated part of the burial ground at Fjälkinge were recovered without any apparent pattern based on age or sex.

Among the 80 examined child skeletons in Fjälkinge, 65 (81.2%) originate from infants, i.e. in the age group 0–1 year (Fig. 4), and 4 of these are so small that they probably are those of prematurely born infants. Among the older 15 examined children, 14 had died at an age of 1–

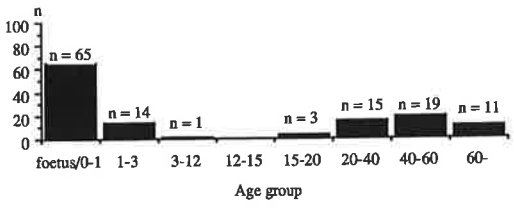

Fig. 4. Age distribution, all individuals.

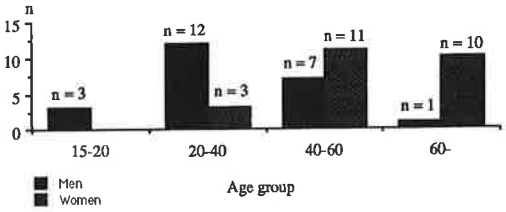

Fig. 5. Age distribution among women and men.

3 years and one at about 12 years of age. In other words, 79 of the 80 children had died at estimated ages of 0–3 years, making 79 out of a total 128 individuals or approximately 61%. Among 24 women, only 3 (12.5%) had died at ages between 20 and 40, while 10 (41.7%) reached the age of 60 or more, one of them probably about 80 years of age (Fig. 5). On the other hand, the examined male skeletons represent all age groups from juvenile to senile, but only 1 out of 24 (4.3%) had reached the age of 60 years or more (Fig. 5).

Graves with special features

In four instances the small children had been buried two by two in the same grave (graves 314, 399, 776 and 952), in grave 952 the two children together with two dogs, one of them a pup. Unusual findings in four graves for adults – two of them stacked, one upon the other – also call for detailed descriptions.

Grave 314 was rather unimpressive and contained two small children. They were 0–3 and 3–6 months old, and can therefore not have been siblings. The children were lying close together on their right sides with bent legs and arms. The younger child was lying in front of the older one (Arcini 1996, app. 1, p. 11). This grave is in a way a terrifying document from times past, but also a unique insight into the positive traits of Viking society. Obviously, the two children died at the same time and this meant double mourning for the community. The inhabitants of the village were few and, of course, everyone felt sorry for the children and sympathy with their parents. The children were buried in the same grave, and the way they were placed meant not only company; it is obvious that the older child was supposed to protect the younger one. These observations indicate that Viking Age adults regarded their children more or less as their equals and also that they had many thoughts about some existence after death. This is far from considering newborns as non-personal beings that for one reason or the other may be set out to the wild animals.

Grave 952 has much in common with grave 314 in arranging for protection. This grave was rather deep and contained two children and two dogs placed in three layers. On the bottom of the grave a child, 6–9 months old, was found on its left side with an earthenware vessel as grave goods. The middle layer contained another child, 9–12 months old, lying on its right side and covered with stones with an earthenware vessel and a whetstone as grave goods. At the top of the grave lay two dogs of different sizes. One was a pup (Helgesson 1996, app. 1, p. 25). It is possible that two children died at the same time, but that two dogs died simultaneously seems impossible. Again we can see two children buried together in one grave to keep each other company and furthermore given protection by dogs, obviously sacrificed for this purpose.

Grave 65 and grave 65 b were also stacked, one upon the other (Fig. 6). The upper grave contained a man, about 60 years old, given an iron knife and a comb of antler as grave goods. Beneath this grave was an old woman, more than 80 years old, buried in the position of a foetus in

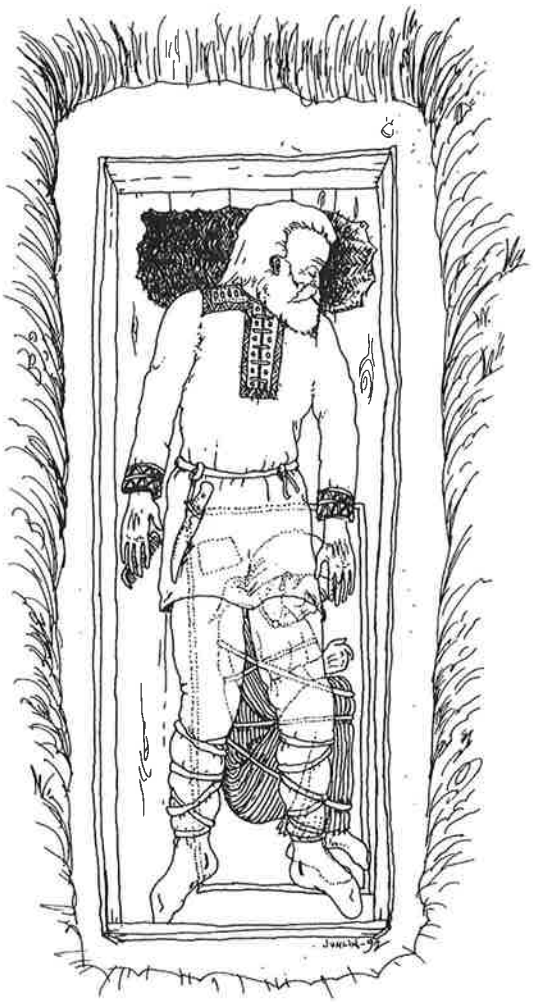

Fig. 6. Graves 65 and 65 b. Reconstruction drawing. Drawing by Jimmy Juhlin.

Fig. 7. Grave 176. Photo by Bertil Helgesson.

a coffin that was only 0.80 m long. Obviously the corpse had been wrapped in this position. At her head there was an amber bead as her sole grave goods. Some bones belonging to the woman were found dislocated, probably because her grave was slightly disturbed by digging for the upper grave (Helgesson 1996, app. 1, p. 25). No other individual was found buried so deep beneath the ground as this woman. The hole that was dug for her small coffin probably was not very grave-like, and she was put in a very strange position. The deep grave left space for another grave, and it is likely that it was predetermined that the man was to be buried above the woman. Therefore, there must have been a relation between these two individuals. She was probably not his wife because she is much too old and was buried before him. Instead she might have been his mother or perhaps his old female slave. At her death this woman was very old and perhaps

rather helpless. Probably she was dependent on others to survive and, thus, had much in common with children. This may explain why she was buried in foetus position and then, seemingly, given protection by a man who might have been her son or master.

The individual in grave 176 had been left in an extreme body position in the grave (Fig. 7), maximally bent over the legs. The body had been placed in a full-size wooden coffin together with some pearls, a wooden bucket, a spindle wheel and a tusk from a pig. This is a very unusual type of burial, indicating that the individual was disliked by others. Still the grave was richly furnished and the deceased must have been a respected person. It has been impossible to determine the sex of the individual (Arcini in Helgesson 1996, app. 1, p. 7). Perhaps the deceased was associated with unnatural beliefs and the unusual burial was an attempt to prevent haunting.

In grave 363 a middle-aged man had been buried with his back up and his knees bent in a grave much too small (Helgesson 1996, app. 1, p. 13). It seems that this was not a customary burial but rather a way to quickly get rid of the corpse. In all cultures this is the worst way to be positioned in a grave and the best way to dishonour the deceased. It might have been a thief or assailant from a distant village, but this seems less likely for a man who was allowed to be buried in the common burial ground of the village. It is more probable that this man was an inhabitant of the village who had run intoconflict with the villagers and, therefore, was buried in an unpleasant way.

The unhealthy and long-lived inhabitants of Viking Age Fjälkinge

Besides the unusual age distribution among the 128 Viking Age individuals recovered in Fjälkinge, one characteristic thing is that many of them had been subjected to trauma and disease of their bones or teeth.

Evidence of fractures has been observed among three women and three men; in one case a woman had 3 fractures. The bones of the forearm constitute the most common site for fractures, five cases. It is particularly the lower part of these bones that is affected and, therefore, these fractures are probably not caused by physical fighting. In the old woman in grave 65 b fractures are seen in the lower part of the upper arm and of the forearm and in the pelvis, and all of them are most probably of osteoporotic origin.

In this material non-healed fractures have not been found, but some of the fractures have healed with dislocation. Also, two women were found to have been subjected to long-standing luxation of the shoulder joint, in both cases on the right-hand side, indicating that people in Viking Age Fjälkinge often had no choice but to live on with such a condition, making them severely handicapped in daily life.

Degenerative changes of the joints are common, osteoarthritis (OA) designating a condition when the cartilage in parts of a joint has totally disappeared and the bone surface has become shiny, so-called eburnation. OA has been observed in six individuals, all of them women (Arcini 1996). In this material the knee joint is the most common site for OA, although other joints such as the shoulder, elbow, wrist and hip and joints in the hand have been affected. Among the individuals with OA, two are over 40 years of age and the other four are older than 60 years (Arcini 1996).

Signs of rheumatoid arthritis are very seldom found in archaeological skeletal material, but due to the excellent preservation conditions in Fjälkinge, one most probable case of rheumatoid arthritis has been discovered. In a woman, 50–60 years of age, severe destruction of the bone in the small joints of the hands, feet, the jaw joints, the spine, and in several of the big joints is found. In the jaw joints, hands, elbows and knees the changes are found to be bilateral (Arcini 1996).

Leprosy is another disease, not so uncommon at that time. In Fjälkinge it has been observed among four individuals, one woman and three men (Arcini 1996). There is nothing aberrant about the location of these individuals in the burial place: three of them are buried in the north part and one in the south, but all four are buried among the others. The leprosy cases in Fjälkinge are not the only ones found in prehistoric/medieval skeleton material within the present-day Sweden. Leprosy has previously been observed in material from Åhus (Lindegård & Löfgren 1949), Lund, Helsingborg, Tygelsjö all in Skåne (Arcini in prep.), Tierp in Uppland (Arcini in prep.), Härads Kumla in Södermanland (Arcini in prep.), and Sannagård in Halland (Arcini & Artelius 1993). The last-mentioned case is the oldest one, dated to 400–600 AD (Arcini & Artelius 1993).

Besides the already mentioned skeletal signs of trauma and disease, a peculiar and very uncommon disease/malformation known as Fong's syndrome, today approximately found in 1 in 100.000, was diagnosed in a woman who died young. The skeletal manifestations of her disease are bony horns on the outside of the ilium (the largest bones of the pelvis) and that the patellae are the size of those of a child of 4–5 years of age. This disease is of dominant hereditary origin, i.e. one of the women's parents probably had the same disease, and if she had any children herself, they ran a 50% risk of being affected. The disease could also have arisen due to mutation in the affected individual (Arcini 1996).

General tooth health was bad, as seen from the frequency of individuals with caries and of individuals who had lost teeth *ante mortem:* more than one-third (4/11) of the examined in the age group 20–40 years of age had molars affected by caries. The frequency is only modestly higher in the next age group 40–60 years of age (8/18) but then again lower in the individuals who had reached the age of 60 years or older (2/11) (Arcini 1996). The latter can be explained by the fact that many of the older individuals had lost many of their teeth during their lifetime, erosion by caries being one cause. If that is the case, then caries frequency in molars probably has been higher than shown here. An example is that nine individuals, three men and six women, older than 40 years of age, had lost 75% or more of their molars before they died without having any caries left in the remaining ones. Three of them had lost all their teeth. Although frequency of caries in this presentation is calculated from molars, it should be mentioned that there are individuals with caries in other teeth as well. It should also be pointed out that no caries has been found among the children.

Signs of infections in the jawbone near the tooth-roots among the individuals where the tooth are still in place or where it is lost *ante mortem* were also noticed. Such signs were found more often among men (1.0 on average per person) than among women (0.4 per person). In nearly half of the cases tooth wear is supposed to be the explanation for the abscess and in one third caries is the probable cause.

Deficiency diseases are seen in all age groups of the Fjälkinge individuals presented here. Enamel hypoplasia is the designation of a change that can be seen as a horizontal line on the enamel of the tooth, due to deficiency of vitamin D which has disturbed the development of the enamel (Sarnat & Schour 1941). For permanent teeth it arises in childhood during the construction of a tooth, but it persists and can be observed as long as the teeth are not too heavily worn. Enamel hypoplasia has been observed in three women and three men.

Discussion

In 1990 a rescue excavation was carried out in the middle of a residential neighbourhood, facing development of a large lot covering approx. 7,000 m2 of a sandy drumlin, in itself extending over an area of about 13 hectares (130,000 square metres), and the skeletons of 128 individuals were unearthed. Thus the surprising discovery was made of a burial ground dated to the latter

part of the Viking Age and the early Middle Ages. As to its full size, one may speculate that the area excavated corresponds to 5%, maybe 10% of the total area used for the purpose, indicating that a total of more than 1,250, perhaps 2,500 individuals may have been buried here.

In the same village of Fjälkinge, one additional burial ground has been found dated to the Viking Age and it is situated just 300 metres from the lot Fjälkinge 35:60. In this burial ground seven graves containing eight individuals were found in 1980 (Helgesson 1992, p. 43). This shows that a Viking Age village may have had two or perhaps even more burial grounds in use at the same time.

Changeable body orientations and burial traditions in other respects may give clues to the chronology of the transition from pagan to Christian religion in Fjälkinge. Similar observations have been made during excavations of some 150 graves from the late Viking Age on the Danish island of Langeland. The decades around AD 1000 may be considered as a period of missionary work, and the transition between the two religions may be seen in rather heterogeneous burial customs.

The first group of graves uncovered in Fjälkinge was accomplished under the influence of pagan religion and may be tentatively dated between AD 900 and around AD 1000. The Christian religion was probably fully introduced at the beginning of the 11th century. It may be suggested that a local chieftain actively promoted Christianization in Fjälkinge and that an early church was built close to the burial ground (Helgesson, in press). This happened before the Fjälkinge region was integrated with the Danish state. At the beginning of the 12th century a second church, still standing today, was built about 500 metres to the south of the burial ground (Helgesson, in press). Thus, in Fjälkinge Christianization and integration with the Danish state apparently were two separate courses of events.

The graves uncovered in Fjälkinge in the course of this study show aberrant age distributions, and three groups of individuals dominate the demographic picture. They are young children, middle-aged men and old women. Of course, this does not represent the actual demographic composition of the local society and must therefore be explained in a wider context.

Without any doubt, the exceptionally satisfactory conditions for preservation of skeletons in Fjälkinge as well as the special care taken during excavation explain the high availability not only of infant skeletons but also of adult ones, allowing for several distinct palaeopathological diagnoses. Besides, the skeleton material from Fjälkinge convincingly illustrates the fact that in Viking times also children including infants were buried, and that it should not be considered impossible to recover their graves and skeletons in great numbers.

For comparison one may choose to study skeletal material from early medieval Lund, for example, the cemetery of the church of Sven Forkbeard, in use 990–1020/30, that is, during the same period as Fjälkinge (Cinthio 1996), and that of one of the other two wooden churches, the Kattesund church in the immediate vicinity of the former, in use ca. 1050–1100 (Arcini in prep.): among 286 and 253 investigated individuals, respectively, recovered from each cemetery, about 6% and 7.5% respectively died at an estimated age of 3–12 years. One may point out that in the cemetery of the Kattesund church too, many skeletons of small children and infants have been uncovered, viz. 28% of the 253 individuals had died at an estimated age of 0–3 years (Arcini in prep.).

It is an old contention that newborn children in the Viking Age society were set out to be eaten by wild animals and that this fate especially happened to unwanted children. It was thought that the society was not able to support all children and that, therefore, many girls, malformed children and the children of slaves supposedly were set out. The present investigation strongly

contradicts this old stereotyped idea, and the custom of burying children seems to be consistent. This is also natural when seen in a wider economic and social context.

The Viking Age is today regarded as an expansive period in agriculture, and a large expansion in the agrarian landscape occurred. The arable fields were more intensively cultivated and new areas were colonized. Also stock-raising seems to have increased, yielding milk, meat and manure (Berglund 1991, p. 82). Logically, all human beings were needed to exploit the landscape and, thus, it also became possible for them to earn their living.

In the Viking Age society the family was important, and this has made us believe that the families were buried together in the burial grounds. The present Fjälkinge excavation shows that other patterns are quite possible. It is obvious that sex and age were important in Fjälkinge, and perhaps also social affiliation (Helgesson 1992, pp. 42 f.).

As mentioned earlier, the excavated area at Fjälkinge only covers about 5% of the surface area of a sandy drumlin suitable as a burial ground. The most probable explanation for the aberrant age distribution is that, for some reason, the people of a Viking Age community, such as that of Fjälkinge, had some rules for separation of their dead of different age groups into different sections of their burial ground.

Thus, the skeleton findings at Fjälkinge disclose that in one section of a burial ground of that time some age groups might be significantly over/underrepresented. This shows that calculations as to the age distribution at death in a community made on such a limited basis, therefore, may be quite unreliable, even if the skeletal material is very well preserved. This statement is especially true as regards infant mortality. So one thing we may learn from this investigation is that great care should always be applied when interpreting observations, one's own as well as those appearing in scientific papers by others, based on the skeletal materials of limited size and/or originating from only one part of a burial place.

The individual descriptions of each skeleton make it clear that in many of the examined inhabitants of Fjälkinge, evidence of trauma and/or of diseases could be observed, and the women seem to have been the most severely affected. For some period of their lifetime, several of the adult individuals must have been dependent on their relatives or friends for survival. Thus, one convincing conclusion is that people at the time took care of their sick and deceased fellows.

For example, the woman who was affected by rheumatoid arthritis was severely handicapped, and surely she had only survived until the age of 50–60 years despite her disease because there were people who took good care of her. One may speculate that the old osteoporotic woman, who reached the age of 80 also should have needed much help since her fractures most probably had arisen when she was already old. For example, one may imagine that the almost 80-year-old woman stumbles on a threshold, falls but tries to stop the fall by stretching out her hand. Then she breaks her left wrist, the lower part of the left upper arm and then falls on her hip and breaks that, too. Thus one envisages an old women in her bed with fractures of three bones. Her toothless mouth cannot chew very well, so she must live on porridge. Still she survived to the extent that the fractures healed well except the fracture of her hipbone, which had not healed completely when she died.

The reason for the bad dental health of the Fjälkinge inhabitants of Viking times could be that they lived a good life on diets containing sweet foodstuffs such as wild honey, and perhaps they also had the habit of eating often between meals.

However, despite all the sufferings of the examined individuals in Fjälkinge, indications are that if people had survived their first three years, they often became quite old. For adults, in reality that is a sign of quite good health conditions.

In conclusion, the findings in this relatively small portion of a much larger burial ground in Fjälkinge already yield unusual insight into the living conditions, diseases, beliefs and social life of Viking society, especially since many of the graves have unique features and because of the aberrant age distributions. Only the sum of finds recently made in four smaller burial grounds on the Danish island of Langeland, containing the less well preserved skeletons of some 200 individuals, may be compared with the present ones made in a single excavation site. At the same time as one may suspect that future excavations in other parts of the same sandy drumlin in Fjälkinge will be very rewarding, it is obvious that the largely different aspects of life and burial customs at the end of the Viking Age, as disclosed by recent excavations at Fjälkinge and in Langeland, make our picture of living conditions at that time more complete.

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