## Berit Sigvallius

## **ABSTRACT**

The investigation of cremated bones concerns more than 450 burials from Iron Age burial grounds, 200-1000 AD. During this period of time, the amount of animal bones in the burials increases, both considering number of individuals and number of species. Some species are always cremated as complete carcasses together with the human being; others are represented only by certain parts of the bodies. Some species might be mostly leftovers from grave meals, some could be food for the deceased, and some might be symbolic sacrificial gifts. Some combinations of species could be used to measure the social status of the deceased or to study religious changes during time.

The custom of cremating deceased persons instead of inhumating them, had already arrived in Sweden in the neolithic period. That early cremations are however rare, and comparatively rare they remain throughout the Bronze Age until the beginning of the Iron Age around 500 BC. In the Iron Age the cremation very soon became the most common burial form and it remained so until the end of the Viking Period. As Christianity was introduced the cremation disappeared and the custom wasn't resumed until the year 1887 (Bra böcker 1984).

When cremation was resumed at the end of the 19th century, the reasons were partly hygienic, partly due to lack of space in churchyards. There is no reason to believe that Iron Age-people cremated their deceased due to lack of space in cemeteries, though, since some of the cremations are surrounded by huge constructions covering an area of more than 150 m<sup>2</sup>, even if the average size is of course much smaller. There is also very little reason to believe that hygienic reasons were decisive, since the burial custom isn't consistent. Throughout the entire Iron Age inhumations occur parallel to cremations. What decided whether a deceased person would be cremated or inhumated we don't know today. Local traditions or different religions could be explanations but it cannot be excluded, that the individual himself, or his family, made their own choice out of preference just as we do today.



Fig 1. A quite ordinary cremation, the bone fragments are small: 1-2 cm.

There are great variations between cemeteries, during the entire Iron Age, regarding the dominance of cremations. The variations are partly due to time, partly to geography. There are also examples of cemeteries in the immediate neighbourhood of each other and from the same period of time, where one cemetery is totally dominated by cremations and the other by inhumations.

During that long period of time, around 1500 years at the least, during which cremations were performed, traditions and customs naturally changed. During the

No. of animals	Before AD 350	AD 350-600	AD 600-1050
0	81%	34%	23 %
1	10%	29%	13%
2	9%	19%	18%
3	-	6%	20%
4	-	4%	11%
5	-	4%	5%
6	-	4%	6%
7	-	-	2%
8	-		1%

Fig 2. Percentage of cremations containing 1-8 individuals of animals, based on 285 cremations. Preliminary result.

first half of the Iron Age people were mostly cremated alone; a dog or parts of a sheep might have accompanied the deceased on the pyre. During this period, skeletal remnants were probably carefully picked out of the ashes, which means that the bones are still clean and white today. The bones were most probably crushed into 1 or 2 cm large pieces (fig 1), and often at least parts of them were put into some container: a claypot, a wooden vessel, a splinted vessel or just a pit, sometimes lined with stone chips.

During the late Iron Age the number of animals on the pyre increased and as a result of this it is probable that it was much more difficult to just pick the bones from the ashes. The bones from these cremations are therefore mixed with ashes which have coloured them greyish in time. In these cremations there can be several individuals from different species and there are also examples of cremations with several individuals from the same species. One, two, or three animals from different species is the usual equipment from 500 AD till the end of the Viking Period (fig 2). Only people who were very well off received more animals than this. We can see that these people were wealthy, not only from the number of animals on the pyre but also from the size of the grave and the artefacts.

At the end of the Viking Age the custom of sacrificed animals in the cremations culminated, and sometimes one gets the impression that half of the animals in the pyre were sacrificed to the deceased. But during this part of the Viking Period there are still cremations which don't contain more animals than what was common during the first half of the Iron Age (fig 2). Whether this is a result of remnants of older traditions, religious or social differences, is very hard to determine.

One could say that the dog and the horse belong to the standard equipment in cremations. Very often these two animals are found together, sometimes just one of them. Other animals found in cremations are cats, squirrels, cattle, sheep or goat, fishes and birds. Also

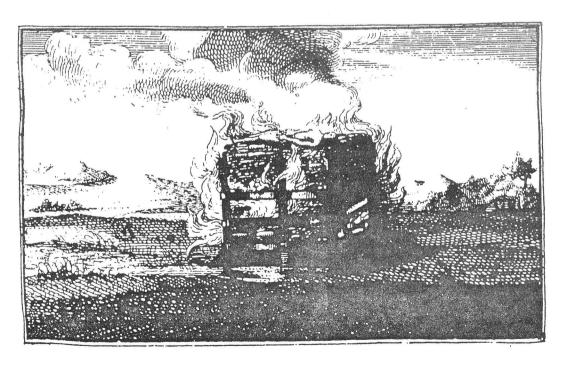


Fig 3. This is how the 18th century scientists is imagined a prehistoric cremation; with the human body placed on the top of the pyre. From PACT 1987, cover.

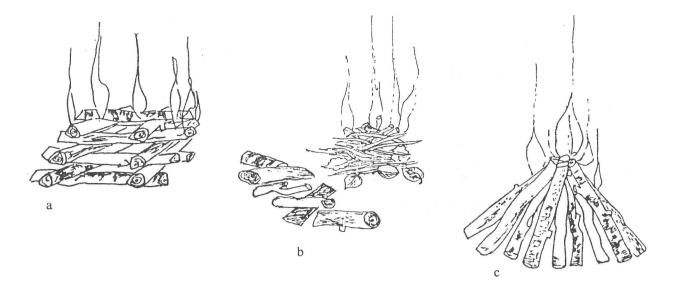


Fig 4. Experiments have showed that the "log-house pyre" (a) is the most efficient one; correctly constructed it burns quickly without falling. The "camp-fire pyre" (b) takes the longest time and requires much work, and in the "tent pyre" (c) the logs will fall completely out of control in any direction. Drawing: Rita Larje.

claws from wild beasts occur, namely from bear, lynx and wolverine, but these bones are of somewhat different character since they are hardly sacrificed animals, but instead skins with the claws left on. Fish bones are very rare in cremations, but this could be due to excavation techniques: to find the tiny fishbones it is necessary to use watersieving and this has not normally been practised. The bird bones come mostly from chicken, often roosters, but other species may also occur. The second most common bird is goose, but wild birds, for example waders, are also found.

It is not unusual that the most richly equipped cremations from the late Viking Period contain all, or almost all, of the species mentioned, sometimes with more than one individual from the same species. One could try to imagine the huge pyre which was required to cremate all these bodies. Fig 3 shows how the 18th century scientists imagined the prehistoric cremation ceremony, but this shows only the cremation of one individual, a human being, placed on top of the pyre.

There are, as far as I know, only two contemporary descriptions of prehistoric cremations. The oldest one comes from the Beowulf-saga, describing events around 500 AD, and this says nothing about any sacrificed animals (Collinder 1988). The other description was written by the Arabian explorer Ibn Fadlan, who in the year 922 AD witnessed the cremation of a Viking chief on the shores of Volga (Birkeland 1954). Around the ship a huge pyre was constructed and in the ship sacrificed animals of different species were placed. A human being, a young woman, was also sacrificed and

cremated along with the chief. Ibn Fadlan tells us how the horses were baited before they were cut into pieces and thrown onto the pyre. When the pyre was finally lit, it burned down in an amazing speed. This well constructed pyre was built on the basis of around 1500 years of experience. In fact, we can say today, that the description given by Fadlan must be very true to reality. The animals mentioned in his story are precisely those we regularly find in cremations.

Iron nails are found in lots of cremations, showing that the deceased was cremated, if not in a ship, so maybe in a coffin. The description of the efficient pyre tells us that people knew very well how to construct a pyre in order to make the fire consume several fresh bodies in a short time. This is in fact a matter of technique. There are of course several different ways of constructing a pyre, but experiments made with pyres of three kinds (fig 4) show that the most efficient one is what one might call a log-house pyre.

In the first experiment in cremating a fresh body, it was believed that the procedure shown on pictures and drawings of pyres with the bodies placed on top was the best way of doing it. Fig 5 shows how the first pyre was built, and a rabbit was cremated, placed on the top. The result of this was a very unpleasant experience. After around 15 minutes the skin on the belly burst and the contents of the bowels was pushed out (fig 6). After a short while, the intestines were punctured and bodyliquids ejected approximately 1.5-2 meters out of the pyre. By using a slightly different method, that is, putting the body inside the construction (fig 7), this

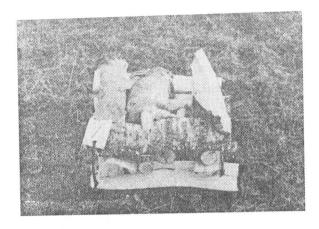


Fig 5. Inspired by pictures of modern Indian pyres, the first rabbit to be cremated was placed on top of the pyre.

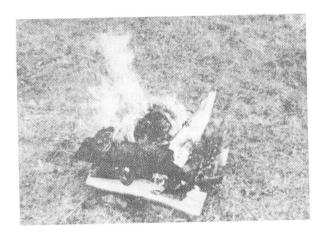


Fig 6. After approximately 15 minutes, the skin on the belly burst and the contents of the bowels were pushed out.

unpleasant experience was avoided. The cremating procedure was also much quicker and more effective in this way.

What we have left today is the result of a ceremony, but the ceremony itself is maybe not so easy to get at. What we know is that the same species are identified in cremation after cremation. It was no coincidence which animals were sacrificed to the deceased. Quite clearly there are large differences between the number of animals in the richly equipped cremations and the poorly equipped ones. The richer you were in your lifetime, the more animals were sacrificed to you when you died; it sounds clear and easy. Unfortunately it isn't that easy.

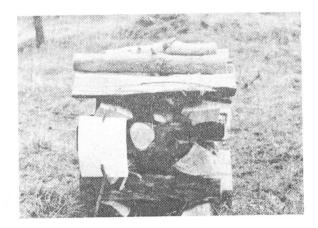


Fig 7. By placing the body inside the pyre, the unpleasant experience is totally avoided.

We can see that dogs and birds were probably always put on the pyre as complete bodies. Horses seem to be complete, but not necessarily always. Other species hardly ever occur as complete bodies. This is especially true of cattle, sheep/goat and pig. Sheep or goat is almost always represented only by feet and heads and all these species very often only by uncremated teeth. Even horses sometimes occur in this way. Only in the richest Viking Age cremations do these species occur as complete bodies and then they nearly always consist of very young individuals.

From these animals there are also a couple of other categories of finds, namely bones that most certainly originally were food for the deceased human being or bones that were leftovers from a meal eaten for example by relatives at the side of the pyre. These bones, of course, come from the meaty parts of the bodies. It is, however, not very easy to distinguish between these different types of finds.

There are of course many different probable explanations to the symbolic sacrificial finds. Many of the gods were associated with certain animals: for example, Tor with goats, the fertility goddess Fröja with cats, the fertility god Frö with pigs and the chief-god Oden himself with horses. It is, however, clear that the sacrificing of several animals to a deceased person requires a good economy and therefore the number of species and the number of individuals of animals also reflect the economy and the social position of the deceased.

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