

Herding horses: a model of prehistoric horsemanship in Scandinavia – and elsewhere?

by

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Fig. 1. This picture of a free-roaming horse from 19th century Norway gives an idea what horses staying outside all year in the Scandinavian climate may look like. The summer-coat of this specimen is most likely short and shiny (Petersen 1902, p. 16).

Abstract:

This article discusses a possible system of horse keeping, used in prehistoric Scandinavia, with focus on the Late Iron Age. The system, here referred to as that of free-roaming horses (Sw. *utegångshästar*), are still in use in several parts of the world and known from historic Scandinavian sources. The idea of the free-roaming horse system is to keep a surplus of horses under natural conditions, which means that the animals are left to themselves during the major part of the year, and in most cases, their lives. The system leaves few, if any, traces in the archaeological record, but different sources indicate that there are many horses hidden behind the few stalls in Iron Age byres. However, there is ample evidence in archaeological and written sources that, when put together and illuminated by modern examples from different cultures, provide fruitful information about how great men and women kept their horses c. 1500 years ago.¹

The Scandinavian Iron Age

This article mainly deals with the situation during the Scandinavian Iron Age, an era that stretches from the introduction of iron,² to the total break-through of Christianity.³ In years, this means c. 500 BC to 1060 AD. This time-span is further divided into several periods, whose names and extent differs somewhat between the Scandinavian countries.⁴ In the Swedish chronological division,

the line between the earlier⁵ and later Iron Age is drawn around 550 AD, when the so-called Vendel period starts. This period is also known as the Germanic Iron Age, and will be referred to in that manner by me. The last and most well-known era of Swedish prehistory, the Viking Age, stretches from 775 AD to 1060 AD.

Terminology

I have chosen the term *free-roaming horses* for the main characters of this study: horses living under some human influence, but most of the time managing on their own. Free-roaming horses is a translation of the old Swedish word *utegångshästar* (*utegangshester* in Norwegian) and horses living in “the wild”, but under some human control. Sometimes they are even tame and broken to saddle or harness, but not needed at the moment. They most often have owners, sometimes they are the result of a breeding programme where only selected stallions are allowed to run with the mares, but the breeding may also be left to nature. Free-roaming horses interact with humans on a regular basis and are looked upon as a resource.

There are at least two other terms describing horses that live under natural conditions: *wild horses* and *feral horses*, the first being simply definable: these horses are specimens of *equus ferus* that have never been domesticated and whose origins are counted back to the truly wild horses of the time before the domestication. Today, only one breed exists: the przewalskii horse of Mongolia, also known as the thaki or Mongolian wild horse. They were extinct in the wild for some decades,⁶ but have been re-introduced during the 1990's,⁷ although the lasting result of this project must yet be counted as uncertain.

Feral horses, on the other hand, are specimens of the domesticated horse who have become wild again. The distinction between these and the free-roaming horses is not always clear, but the first do not interact with humans in the same way as the latter. The mustangs of

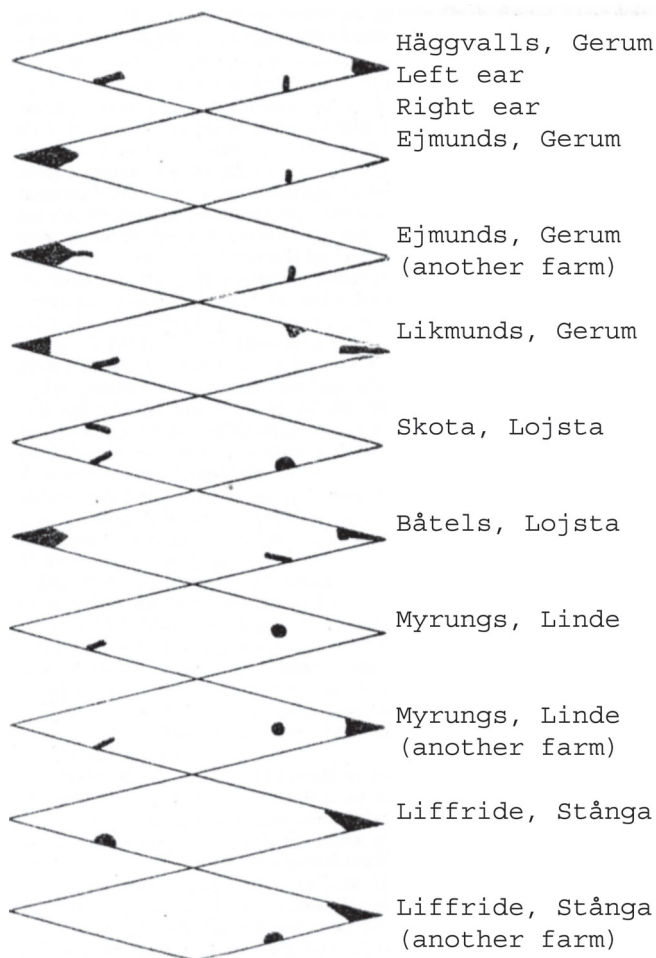


Fig. 2. The ear-marks of some Gotlandic farms. The farm-name is followed by the name of the parish. The two triangles put together symbolises the ears and the dark areas are the marks made in the left and right ear respectively. Every specific cut seem to have names, but these were neither understandable nor translatable (after Ljunggren 1943, p. XXVII).

the prairies of North America once were free-roaming horses, left there by early settlers who wanted to have a surplus of horses easily accessible.⁸ Nowadays, these animals are feral. They are under no human control⁹ and often looked upon as pests.

I draw the line between feral and free-roaming horses where most individuals and herds can be attributed to an owner. Free-roaming horses are owned by someone, feral horses are not. The problem is that it is impossible to make this distinction when it comes to a prehistoric context. Free-roaming horses and feral horses may have been present in the same area at the same time, a condition known from medieval England¹⁰ as well as 20th century Sweden.¹¹

Horses in aristocratic, archaeological contexts from the Iron Age

Turning to the history of Scandinavian archaeology, horses have long played an important role in the discussion on aristocratic environments of the Late Iron Age. One reason is the many finds of luxurious horse tack in the boat graves of the Mälars Valley.¹² These graves are

dated to the Germanic Iron Age and the Viking Age and have a famous counterpart in the 7th century ship burial of Sutton Hoo, England,¹³ albeit unique in its lack of horses and equestrian tack. Prominent Viking Age sites with horse burials are the ship burials from Oseberg and Gokstad in Norway¹⁴ and Ladby in Denmark.¹⁵ The superiority of the horse in religious beliefs and cult is seldom questioned. There seems to be a general understanding, based on different types of sources and examples dated to the earlier as well as later parts of the period, that the horse is not *an* important animal, but *the* most important animal of the Old Scandinavian cult.¹⁶

The bridles from the boat graves are often of exquisite manufacture as well as material. The leather straps are long gone, but the ornamented gilded strap-mounts of bronze still exist. Garnets are often placed on the mounts in cloissoné-technique, which further stresses the exquisite handicraft of the bridles. When looking upon these bridles, one cannot avoid getting impressed by them and it is not remarkable that much of the academic discussion concerning horses and horse-tack from the Late Iron Age has been devoted to these bridles. In several cases, the ornaments of the mounts have played a role in the establishment of chronologies.¹⁷

Many studies devoted to horses are really discussing ornaments and chronology. The art of riding, the relationship between man and horse and possible systems of horse-keeping and breeding have not gained much attention from archaeologists. I therefore want to focus on the horses rather than the horse-tack of the Iron Age. The reason is very simple: since the age of nine I am a passionate rider, one in a row of followers and carriers of a tradition that might be as old as 6000 years. At modern universities, horses are studied by scholars of the natural (e.g. veterinary medicine, DNA-studies) as well as the cultural (e.g. archaeology, history, art history) sciences. I therefore find it natural to combine different types of sources in my research on horses in ancient times. These horses are visible to us through their tack, pictures cut in rock, painted on paper, papyrus or stone, poems and sagas, the structures of farms where their owners have lived, a landscape created by grazing animals and, last but not least, by the remains of the horses themselves. I will therefore try to use all kinds of sources I believe can shed light over horse keeping in Iron Age Scandinavia.

The written sources and source criticism

The written evidence from the millennia of Iron Age Scandinavia is extremely sparse, compared to Roman standards. Archaeological finds are the main source to our knowledge of the period. Most of the written material that does exist, e.g. the Icelandic sagas, originate and takes place in the Viking Age, but was written down in the Middle Ages. This means that the society described in the texts may be a different one from that of the "authors". This is especially clear when it comes to religion, since the Old Norse faith is replaced by Christianity during the Viking Age. Several scholars, most recently Neil Price, have shown how vital a part of daily life religion

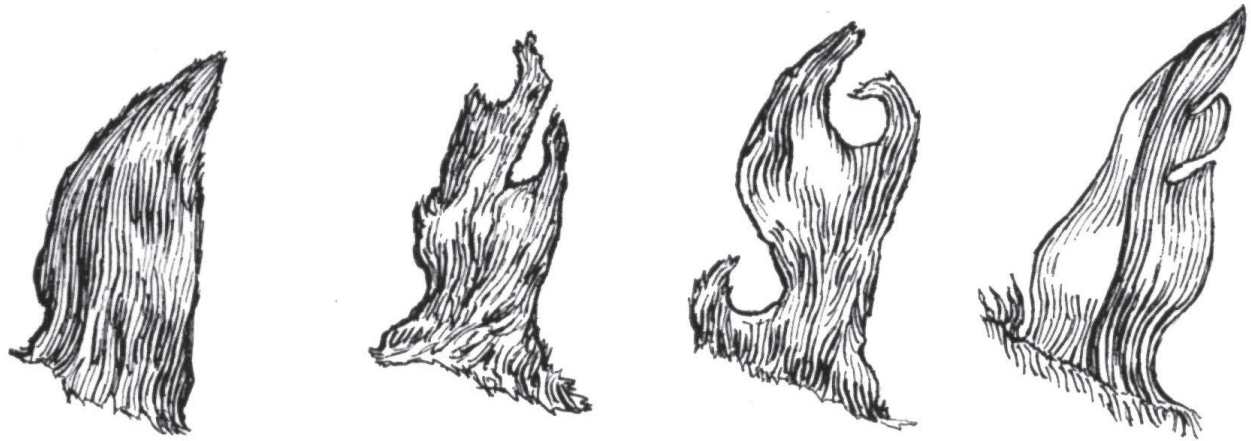


Fig. 3. Ear-marks from the Scythian graves of Pazyryk (Rudenko 1970, fig. 56).

was during the Viking Age.¹⁸ The written sources must therefore be looked upon through the glasses of source-criticism, but can still contribute to this study and give the skeleton flesh and blood when it comes to interpretations concerning ownership, law and thoughts about Iron Age horsemanship.

The archaeological sources and something about previous research on Iron Age horse keeping

The stables of the aristocratic horses of the graves in Valsgärde, Vendel, Oseberg etc. are unknown to us. However, stables from Iron Age settlements do exist, and especially in long-houses from the earlier part of the period the byres are marked by more closely set trestles than the dwelling area.¹⁹ Houses with parts of the walls between the stalls preserved are known from e.g. Feddersen Wierde in Germany.²⁰ Calculations of the number of sheep, cattle and horses connected to the Migration Period hill-fort Eketorp,²¹ island of Öland, Sweden, based on the number and size of the stalls, have been carried out by Edgren and Herschend. They conclude that there were 12,6 cattle, 4 calves, 2,5 pigs, 3,3 goats and 29,5 sheep on every single horse.²² In my opinion, there is a wide-spread understanding among field-archaeologists that horses on farms generally were few in number.²³ The osteological investigations often confirm this picture, since horses in settlement material are sparse compared to sheep and cattle.²⁴

Free-roaming horses in Scandinavian contexts have been discussed by e.g. Ulf-Erik Hagberg and Haio Zimmermann,²⁵ who focused on the introduction of stabling of animals. Hagberg concludes that free-roaming horses probably existed in several European areas in prehistoric times and can be regarded as the foundation of a primitive breeding-system.²⁶

To summarise, we can conclude that the conditions under which horses were kept and bred in prehistoric Scandinavia have not been discussed to a great extent. One of the most extensive studies of ancient horse-breeding, carried out by Charles Gladitz, is exclusively based on written sources,²⁷ wherefore Scandinavia is not included. Still, examples of how horses were kept and bred in other areas, sometimes related to Scandinavia

by trade, e.g. Great Britain,²⁸ are valuable as comparison when we try to create a model of the Scandinavian situation.

Free-roaming horses: the idea of the system

Advantages and disadvantages

As mentioned above, the idea of free-roaming horses as a systematic breeding strategy during the Iron Age was first put forward by Ulf-Erik Hagberg in 1967.²⁹ However, he does not examine the system in detail, which leaves a gap for me to fill. I will therefore discuss the general idea and the details of the system as well as advantages and disadvantages.

The basic principle with the system is to keep herds of horses out of human influence for the major part of the year. Horses kept on stable have many needs: food and water at least 2-3 times a day, since the stomach of the horse is very small. Wild horses spend most of their time grazing. A large stomach swollen with food would stop horses from fleeing predators as fast as possible, and flight is the main weapon of the horse. This means that no horse will do well on large portions of food given only once a day. That can cause colick and death. Stabled horses need their humans to take care of the division of food while horses in the field do it by themselves. As long as the pasture is adequate for the number, condition and breed of horses, they will neither grow too fat nor skinny.

Many old farm- and pony-breeds do very well on a small quantity of fodder, compared to modern sport horses. The same breeds share a past of being kept as free-roaming horses, left by themselves in wood- or moorland for months.

Furthermore, to be able to perform his best when put to work, the stabled horse needs daily exercise. How much depends on the work the horse is supposed to do and on the amount of stress the human is willing to expose the un-trained horse to. Horses kept in a field must also be trained for their task, but they will gain and keep a certain degree of stamina themselves by moving while grazing, running and playing with other horses.

To keep, say ten, horses stabled gives you much daily work. To keep the same horses in the field does not have

to involve any work, apart from checking on them. If the number increases even more, one might not check on the horses on a daily basis and work is reduced even more. A horse-owner with a herd of 100 horses cannot possibly have a close relation to each individual. If the herd is sent up into the mountains in springtime and brought back to the pastures closer to the farm in the autumn, the number of horses is most likely what counts.

Apparently, there are some major advantages with letting horses roam free. But what about the disadvantages? First, it is obvious that the horses used in daily work on a farm cannot be let run loose. They need to be easily available. Ownership of free-roaming horses may also cause discussions and even acts of hostility. In Sweden, the ancient pony-breed *russ* (Engl: Gotland pony, Viking pony) traditionally has been kept free-roaming on the island of Gotland. The breed has existed on the moors and in the woods of Gotland since prehistoric times,³⁰ but was brought to the brink of extinction in the decades around the turn of the last century. The reason was the non horse-owning farmers' dislike of having their crops ruined by hungry ponies. Before the change of land ownership in the mid 1800's, the ponies were roaming the entire island. After the change, their pastures were reduced, forcing the herds to trespass into human territory and the ponies were therefore shot by the farmers.³¹ These problems are known from other areas and the reason for the extinction of the tarpan, which may have been the wild ancestor to all domestic horses,³² was due to the damage done to crops and the tarpan stallions' favour for tame mares.³³ The *russ*, however, did not face this sad fate, but was saved thanks to a number of enthusiasts who managed to raise money for studs in the early 1900's and a fence around the forest known as Lojsta hed in 1932. The first volume of the stud book was published in 1943 with a preface with the history of the breed and its salvation written by Bengt Ljunggren.³⁴ But the examples of these two breeds both point out one of the main problems with free-roaming horses. Another is exemplified by a law from 19th century Norway, where loose-running stallions were prohibited in several counties, because of the problems the horses caused travelers.³⁵ Especially for people mounted on mares, this law must have been a relief.

Luckily, many problems mankind encounter are possibly for us to solve, and there are solutions to all the examples listed above. Working horses are best kept at the farm, but the breeding stock can spend most of their time on distant pastures, so that the land close to home can be used for agricultural work and as grazing areas for cattle and goats, that need to be milked. Keeping the horses in the woods makes it impossible to check upon them on a daily basis and they are left to themselves. There are numerous examples from various areas telling us about the hard life of the free-roaming horses. According to the Swedish hippologist C.G. Wrangel, many ponies used to be killed in the winter storms in Iceland every year,³⁶ but he noticed that the situation had become somewhat better. He also tells the story of a famous *russ*-stallion, who spent his first winter with a shed for shelter and straw as the only fodder provided by man,

left to his own and his family's devices to survive.³⁷ This specific pony later became an outstanding sire and cart-horse,³⁸ which shows one of the strengths of the system: "the survival of the fittest" really clings truthfully when one discusses free-roaming horses (Fig. 1).

Ownership and branding

Ownership of certain horses may be problematic even with stabled horses and many horse-owners chose to brand their animals today. A brand, tattoo or micro-chip is also needed to identify race horses, which is necessary to limit the risk of having one horse racing as another, less capable one. This would otherwise be a lucrative business for criminal gamblers and bookmakers. Icelandic-born Icelandic horses still have the mark of their breeder cut into one ear, and free-roaming horses, cattle and sheep on Gotland were identified in the same way before the introduction of fences³⁹ (Fig. 2). This way of marking horses is much older as will be exemplified below. Another method with old traditions is branding with hot iron, which can be observed on some monuments, e.g. the 15th century wooden sculpture of St. George killing the dragon in the cathedral of Storkyrkan, Stockholm. The beautiful grey stallion bears the brand of a famous Swedish noble family.

Selective breeding and pedigree

Nowadays horse-breeding is big business and the "right" pedigree can add a zero to the sport-horse foal's price when put up for sale. Pieces of evidence tell us that pedigree could be important already in ancient time. One example is part of the 15th century poem *Achau'r ebol* (Eng: Pedigree of a Welsh Cob⁴⁰), written by the Welsh poet Guto'r Glyn (c. 1445-1475).

*"He is a son of 'Du o Brydn'
He would win the race in any fair field
His mother was daughter of the stallion of
Anglesey which carried eight people
They are descendants of Du'r Moroedd
And I know that he is one of them
He is nephew to the Myngwyn Ial.
In Powys no fetter could hold him,
He is of the stock of Ffwg Warin's stallion
And that stock grinds its fodder small
With its strong jaws
He is a stallion of the highest pedigree
In Anglesey
From the line of Talebolion."*⁴¹

The stallion described has a number of famous ancestors, one of which lived two centuries earlier.⁴² One cannot help having doubts about the truthfulness of the horse's relation to this ancestor as well as to some of the performances of other horses in the pedigree. However, the poem tells us of the importance of pedigrees among horses more than 500 years ago. Although Guto'r Glyn's Welsh Cob stallion may have been bred and raised in a royal stable, farm-horses and free-roaming horses in modern times have had a kind of pedigree recorded.

This did not consist of individual horse-names but of the remark “from the owner’s own herd” or “from the old stock of the farm”. The remark is common in the oldest studbook of e.g. the russ and the Norwegian doele-horse.⁴³ A herd connected to a specific person or a farm gave the horses a collective pedigree.

The question of pedigree is closely related to that of selective breeding. When horses are kept out all year, sometimes far away from the owner’s influence, is there any way to keep control over which stallions cover the mares?

Control cannot be gained in each individual case, but there are ways to raise the chances of having foals by the stallion of your choice. The young stallions of the herd can be caught and castrated or put to work (or eaten!). The first law ever regulating horse-breeding in Iceland dates as late as 1891 and bans sexually mature colts to run loose,⁴⁴ which can be interpreted as a way to control the breeding. The Norwegian law mentioned above is another example.

In areas where horses were more or less feral or free-roaming but very wild, a method to influence the stock was to buy a suitable stallion and let him loose. Hopefully he would manage to reproduce himself. The oriental look of the modern Welsh Pony is regarded to be a result of a very influential sire, Dyoll Starlight WSB⁴⁵ 4, born in 1894, who really put his signature in the history-book of his breed. But who was he? His father was a hackney⁴⁶ cross, but most breed-historians consider Starlight’s mother 75 WSB Dyoll Moonlight to be the main source of her son’s “Arabian” looks. Dyoll Moonlight is considered to be a descendant of an Arabian stallion let loose in the mountains c. 1850, and the blood from one more Arabian stallion, let loose in the hills in the 1840’s, might have run in her veins.⁴⁷ *Ergo*, there were ways to breed your herd of mares to the stallion of your choice, even if you let your horses run free. But the stallion had to be a strong and healthy one to manage to fight opponents and later to stand attacks from his own offspring.

Summing up the ideas of the system

To conclude, one must ask the question concerning the purpose of keeping horses in the woods and hills, sometimes far away from the eye of the owner? I have already touched upon the good economy in being able to keep your breeding stock, the animal you need to produce rather than use, on a minimum of resources concerning work and food, providing you the hardiest and healthiest horses without forcing you to do any work on selection.

Free-roaming horses during the Iron Age

So, what is the evidence of the presence of free-roaming horses in Scandinavia during the Iron Age? As stated above, the archaeological material is more or less non-existent, since grazing animals leave few traces that are still visible 1000 years later. When turning to the written sources the situation becomes lighter.

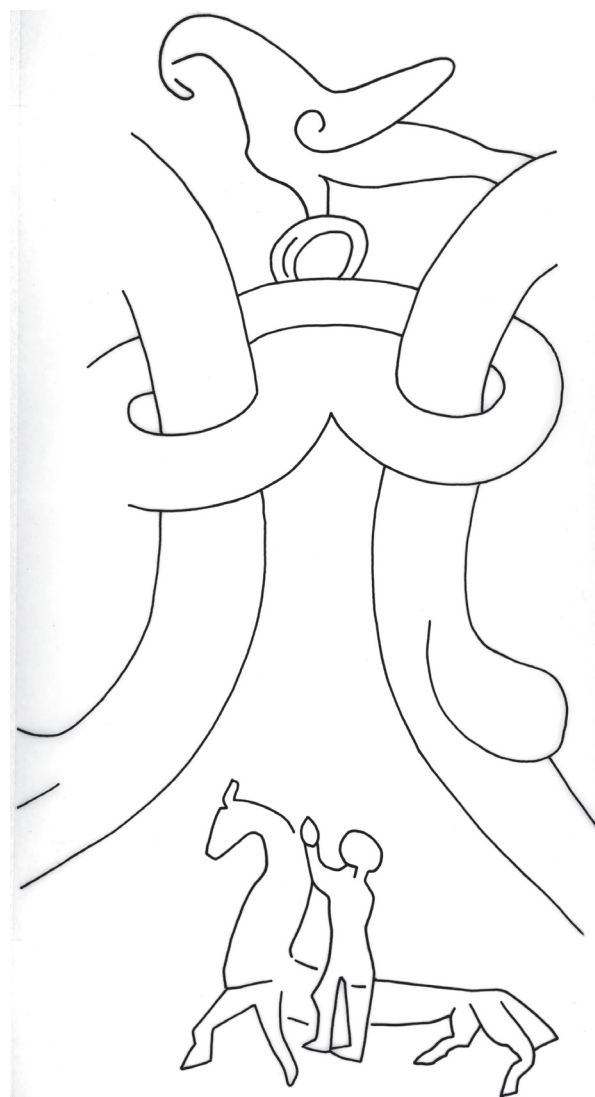


Fig. 4. Example of a peaceful way to use a horse Viking Age Scandinavia: the mounted falconer lures his bird back. The carving is from the runestone U599, county of Uppland, Sweden (Sundkvist 2001, fig. 6:27).

Starting outside the Scandinavian sagas with a work often cited by scholars working with north-European and Scandinavian archaeology, namely Tacitus’ *Germania*, the Roman historian writes:

“It is peculiar to this people to seek omens and monitions from horses. Kept at the public expense, in these same woods and groves, are white horses, pure from the taint of earthly labour; these are yoked to a sacred car, and accompanied by the priest and the king, or chief of the tribe, who note their neighings and snortings. No species of augury is more trusted, not only by the people and by the nobility, but also by the priests, who regard themselves as the ministers of the gods, and the horses as acquainted with their will.”⁴⁸

These holy animals, kept in groves – what where they but free-roaming horses? Certainly kept with different purposes than the practical of having a surplus of horses to use when needed, but no matter the goal the horse keeping system is the same.

Other examples are found in the Icelandic sagas: e.g. *The saga of Hrafnkel Freysgodi* and *The Saga of Gunlaugs Ormstungu*. In the latter, two men, Torstein and Gunlaug, take a ride up into the mountains to have a look at some of Torstein’s horses. The horses are divided



Fig. 5. A mounted warrior of the Germanic Iron Age depicted on a picture foil from the helmet of boat grave I, Vendel parish, Uppland (Stolpe & Arne 1912, pl. VI:1).

into two herds, each consisting of a stallion and three or four mares. The herds are grazing different valleys and the merits of the two stallions are described together with the colour of the horses. Hravnel Freysgodi's stallion Freyfaxi roams his valley with twelve mares, each broken to ride, while the stallion is sacred to Frey and not to be ridden by any mortals. The horses are kept in a valley not far away from their care-taker, but they seem to spend all their time outdoors.

The three stallions mentioned in the two sagas are all described in positive ways. Freyfaxi is, according to his owner Hravnel, clearly one of the best,⁴⁹ fast, strong and worthy of being sacred to one of the mightiest gods of Old Norse Mythology. Torstein's two stallions seem to be good individuals too: one is considered to be the best of the area Borgarfjord (in what respect is not explained) and the other is very beautiful but has yet not proven himself. One must come to the conclusion that these three stallions most probably were selected by their owners to be let loose with the mares. What these sagas give us is evidence for the use of selective breeding among free-roaming horses in the Viking Age.

The sagas in question provide no information concerning brands or marks. Horse-theft did happen; it is mentioned in e.g. *Grettir's saga*, where the main character snatches a favourite mare from a farm-yard,⁵⁰ which of course is not popular with her owner. (The situation is later solved by writing poems and songs to the mare's honour in the typical Icelandic saga-way) I consider it probable, that there was a marking- or branding system already in the Iron Age, but to find hard evidence we have to look outside the Scandinavian context. In this respect, we have an archaeological find that stands out in many ways: the magnificent frozen Scythian graves

of Pazyryk, Siberia, dated to c. 500 BC.⁵¹ Due to the conditions, organic material is preserved. Several marks, clearly visible on the preserved horse-bodies (fig. 3), give evidence of the use of ear-marks, at least in this prehistoric culture. As mentioned above, this technique of marking horses is still in use on Iceland and was used in Sweden as late as the 19th century (cf. fig. 2), which connects the marking-system to the Scandinavian contexts. Ear-marks leave no archaeological traces, unless the conditions are similar to those of Pazyryk. In Scandinavia, we have no frozen Iron Age horse-bodies. The bogs sometimes provide preserved organic material,⁵² but to my knowledge no horse has yet been found in such an environment. Neither do I know of any pictures of horses detailed enough to show ear-marks, even if they were there. The final proof of the use of ear-marks in the Scandinavian Iron Age is still to come. One could also consider the use of fire-branding, a system depicted in Swedish Late Medieval art. Unlike ear-markings, fire-branding does leave archaeological traces since a specific tool is most often used to brand the animals. To my knowledge, this artefact type does not exist, or has yet not been recognised, in the Scandinavian archaeological material.

The conditions under which the horses of the Old Norse Edda has been brought up is seldom or never mentioned. Most of these horses belong to the pantheon, the world of gods. One of the most famous horses of Old Norse literature, Grani, the mount of Sigurd Fafnirsbani, has an interesting history for someone who studies the system of free-roaming horses. It is stated in *Reginismál* in *The poetical Edda* that Sigurd had chosen Grani from his step-father king Hjalprek's personal herd of horses. In a way, Grani is the role-model for the ideal horse

of the Late Iron Age: strong, fast, brave and true to his owner. He also originates from a royal herd of horses, which gives him a glittering pedigree – although no individual names are known.

According to *Reginsmál*, Hjalprek kept his own herd of horses, a manner he is not alone to have adopted in the world of royalty. A later example is the tradition attached to the Danish breed Fredericksborger horse, which earned world fame during the 17th and 18th centuries and also comprised parts of the foundation stock of one of the most famous breeds of today: the Lipizzaner horse of the Spanish Riding School in Vienna. It is clear that many of the stallions used to create the Fredericksborger were brought to Denmark from the Iberian peninsula, an area famous already in Roman time for its production of *destriers* or war-horses.⁵³ But what about the mares? The tradition tells that the original mares used in the breeding programme originated from a specific herd of ancient lineage and with bonds to the Danish royal house.⁵⁴

Perhaps a herd of horses was something the yeoman, chieftain, aristocrat or king might have kept for pleasure, as a resource and as a sign of power. Many great halls of the Late Iron Age have been excavated in the two last decades,⁵⁵ but the horse-stalls are not always visible in the material. Still, the horse is closely bound to the aristocracy of the Late Iron Age through its presence in graves, through the written sources and through the art, which shows the horse as a splendid and proud animal taking part in activities of peace and war of the aristocrat (Fig. 4-5). To return to Tacitus once again, he remarks that the cattle-owners among the Germanic peoples took pride in the number of cattle of their herds.⁵⁶ Maybe the number and quality of horses of the herd connected to your hall gained you wealth, fame and good reputation? It was a way to make you and your hall even more splendid, just like the tapestries covering the walls or the gilded hilt of your favourite sword.

Free-roaming horses outside Scandinavia

I will use the last line of this paper to broaden the geographical perspective. My area of study has been Scandinavia, but as a matter of fact, keeping horses under the conditions described above is an international solution. From the Far East, Mongolian horse-keeping is well known and famed. Here, the horses are kept on the great plains under circumstances similar to those of the Scythian horses of Pazyryk.⁵⁷ In the west, we can take Argentina for example: thousands of horses live on the *pampas* and are never brought indoors.

In densely populated Europe, is there any room for herds of horses? Even today, there are numerous examples besides Iceland and Gotland, which have already been mentioned. In Great Britain we have e.g. New Forest, Dartmoor and Exmoor, and in France the famous white horses of Camargue, in the delta of river Rhône. All these herds may be the remains of an ancient horse-keeping system, once used in the entire world.

December 01, 2002

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¹ The study is built upon a chapter (no. 5) of my doctoral thesis in archaeology. Sundkvist 2001.

² According to the research of the 19th and earlier 20th century, modern research have moved back the date to c. 1100 BC, cf. Hjartner-Holdar 1993, 190.

³ cf. Gräslund 2001 with refs.

⁴ The bibliography Nordic Archaeological Abstracts (also available on the internet: www.naa.dk) can be helpful for anyone who wants to get an oversight of the chronology of Scandinavian prehistory.

⁵ The Early Iron Age in Sweden is divided into three major periods: the Pre-Roman Iron Age (c. 500 BC – 0), the Roman Iron Age (c. 0-400 AD) and the Migration Period (c. 400-550 AD). These periods are further divided into sub-periods.

⁶ Clutton-Brock 1992, 33.

⁷ Llewellyn 1995, 28-33; Frenz 2001, 110-125.

⁸ Zimmermann 1999, 310; Sundkvist 2001, 97-98 with refs.

⁹ There are several rescue-projects for mustangs, trying to make people adopt caught horses and use them for pleasure riding/driving, so in a way, the mustangs are re-gaining their original relationship with man.

¹⁰ Gladitz 1997, 143-144.

¹¹ Ljunggren 1943, XXVIII-XXVIX; Hallander 1989, 70.

¹² Stolpe & Arne 1912; Arne 1934; Arwidsson 1942b, 56-67, Taf. 20-28; 1954, 71-76, Taf. 24-26 & 1977, 56-64, Taf. 20-26, Abb. 79-90.

¹³ Bruce-Mitford 1975-1983.

¹⁴ Brøgger & Schetelig 1917-1928.

¹⁵ Thorvildsen 1957.

¹⁶ Hagberg 1967b, 59 f; Sundqvist 2002, 225-235.

¹⁷ Arwidsson 1942a, 19-21; Krüger 1995.

¹⁸ Price 2002, XX with refs.

¹⁹ See e.g. Sundkvist 1998, 174, fig. 5.

²⁰ Haarnagel 1979, 115.

²¹ The calculations are based on the migration period phase, Eketorp II.

²² Edgren & Herschend 1982, 18 f.

²³ Cf. Olausson 1999, 323.

²⁴ Bäckström 1993, tab. 1; 1996, fig. A & B; 1997, p. 2.

²⁵ Zimmermann 1999, p. 313-316.

²⁶ Hagberg 1967a, p. 18 f.

²⁷ Gladitz 1997.

²⁸ Gladitz 1997, 141-174.

²⁹ Hagberg 1967a, 18 f; 1967b, 79-84.

³⁰ Hallander 1989, 63 with refs.

³¹ Ljunggren 1943, V-VI; Hallander 1989, 64 f.

³² Børresen 1994, 134.

³³ Zeuner 1963, 310; Clutton-Brock 1992, 28.

³⁴ Ljunggren 1943, p. III-XXXIV.

³⁵ Rogan 1986, 184.

³⁶ Wrangel 1911, p. 361-362.

³⁷ Wrangel 1911, p. 359.

³⁸ Wrangel 1911, p. 360-361.

³⁹ Ljunggren 1943, p. XXVII.

⁴⁰ A Welsh Cob is one (out of four) of the varieties of the horse breed native to Wales.

⁴¹ Davies 1990, 10.

⁴² Davies 1990, 8.

⁴³ Petersen 1902, e.g. 115, no 1 Klaaperauden (both sire and dam), 115 f, no 2 Dvergstenhingsten (sire) and 116 f, no 4 Balder (dam).

⁴⁴ Magnússon 1991, 19.

⁴⁵ WSB = Welsh Stud Book.

⁴⁶ The Hackney is an ancient British horse breed, that sadly was re-formed to a flashy cart-horse in the 1800's.

⁴⁷ Olesjö-Andersson 1983, 6; Davies 1990, 36.

⁴⁸ *Germania*, 10:2.

⁴⁹ Freyfaxi and Sigurds's horse Grani have many things in common, one is their extraordinaire ability to "speak" to humans close to them. Freyfaxi runs to his owner to tell him about the forbidden ride the stable-keeper has taken on the holy horse. Grani answers Sigurds wife Gudrun's questions

with body-language after the battle where Sigurd's fate is sealed.

⁵⁰ Grettir's saga, 206 f.

⁵¹ Rudenko 1970, 118 f.

⁵² See e.g. the web-site for the amazing bog find of Illerup-Ådal, Jutland: www.illerup.com.

⁵³ Hyland 1990, 14. The earlier mentioned Welsh Cob was "created" in the 12th century when Spanish stallions were imported to Wales to be used on native mare. Cf. Davies 1990, 8; Gladitz 1997, 162.

⁵⁴ For more history of the Frederiksborger breed and stud, see Branderup 2000, 23-34;.

⁵⁵ See e.g. Herschend 1993, 180-194 for examples.

⁵⁶ *Germania*, 5:1.

⁵⁷ Cf. Hosinsky 1999, 90-95.

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