# Fröjel Newsletter

**Volume 1**
**Issue 1**

## Introduction

Here comes the first issue of Fröjel Newsletter, a newsletter that deals with the archaeological investigations of the Viking Age harbour at Fröjel, Gotland. The investigation carried out in 1998 is part of the project Fröjel Discovery Programme, that aims at as far as possible to invite the public to take part in the project.

Last summer, the first year of investigations was carried out. I have earlier in weekly reports given a brief summary of some of the results from the excavation. But it is of course so, that the final work will take a very long time to carry out.

With Fröjel Newsletter, which I hope to be able to publish at least once a month, but more hopefully once every fortnight, I will give a recount of new results, as the work goes on. The summer was very intense, with about 50 persons engaged at the same time when it was at its peak. The pace is a little more relaxed now, but still we have a hard work in front of us and some work is carried out just now.

First of all, there is an osteological investigation going on concerning the skeletons of about the 50 graves we found during the excavation. The main part of these graves are from a Christian cemetery, found in the garden of the schoolteachers house. The cemetery is probably from Early 11th century, and in use for about 100 years.

The other graves, a little more than 10, are from the actual site of the trading place. These graves can be dated from the 6th to the 10th century. The cemetery is older than the settlement in the area, being dated mainly to the 11th century. The osteological investigation is carried out by **Carola Liebe-Harkort**. She has investigated graves found earlier at the site. She has just started the investigation of the skeleton from the Christian cemetery, and so far it seems as if it is only women. That is not surprising, while the part of the cemetery we have investigated last summer is the northern part. According to traditional rituals in Early Medieval times, the women were buried on the north side of the church.

A strange circumstances that we discovered during the excavation last summer, was that even the graves from the prehistoric time in connection with the settlement, were for women, what we can

judge from the artefacts accompanying the dead. It is not without excitement that we are looking forward to the final results from the work of Carola.

But of course, it was not only graves we hit during the excavation last summer, and of course, the analyses are not only a question of an osteological investigation. With the discovering of about 6000 artefacts, about 70 different building structures and considerably number of kilos of bones, slag etc., it is a huge work to analyse and put together the information to a readable report. **Cornelia Fisher**, who took part in the excavation last summer, is just now trying to combine all the information from different sheets, reports and diaries, and to make a final report of the excavation. We are planning to have that report finished by the beginning of next year. The results from this analyses will to a high degree determine where we are going to start our excavation next summer.

An important part in the publishing of our results is this newsletter, which I will create during the autumn and winter. The responsibility that you, dear reader, will have something to read on the internet, is with **Therese Lindström.** She is having a hard work to transform my texts, and figures into something readable on these fascinating media called Internet. Sorry to say, her appointment will be finished in a couple of weeks, giving me some problem in creating the newsletter. But, in one way or another, we will solve the problem.

In this first Newsletter, I have chosen to display some background information to understand the Viking Age harbour in Fröjel. Among the regularly coming parts of the Newsletter, I will point to a strange item, that is unexplainable, or that gives a divergent picture of the harbour. This time, I have a question about a strange "scraper", which I haven't seen before.

With these words, I wish you all welcome to this first Newsletter from and about Fröjel Viking Age harbour.

**Dan Carlsson**
**Head of the project**

# Fröjel prehistorical harbour, an investigation of the bones

Between the years 1987 and 1990, we carried out minor test excavations at the harbour, in order to find a delimitation of the settlement area, and also to get a certain insight into the function of the place and the dating. We investigated hereby an area of about 290 m2. All together, we found something like 6000 artefacts in the trial excavations, together with a great number of constructions as postholes, herds, house foundations and so on.

To get a clearer picture of the animal composition at the harbour, Ph.D. Berit Sigvallius carried out an osteological investigation of a part of the bone material from the excavation in 1988. We selected the bones from a trench cutting through the hole excavation area, with the idea to cover the whole area. In spite of the material being rather small, there was a distinctive pattern. It is important to notice the remark Berit made that the composition of the animal bones clearly indicate that the harbor was permanently occupied. Below, you can read her analysis of the animal bones.

## Osteological analyses of animal bones from Fröjel Viking Age harbour. By Berit Sigvallius.

The summer 1988, an archaeological excavation took place in a part of Fröjel parish supposed to be a Viking Age harbour. The excavation resulted in a vast number of artefacts, number of building constructions, graves and other constructions, together with a considerable amount of animal bones.

Out of the more than 100 $m^2$ of investigated area, the bones from 21 $m^2$ have been analysed so far. This 21 $m^2$ consisted of the first part of the excavated area in 1988, and all together we collected about 18 kilo of bones, or, put in an another way, more than 23.000 fragments of bones (see table 1). The main part of the bones is made up of unburned animal bones, but there are some burned bones as well. In the material, there are also some unburned human bones, which probably came from one or several graves from the area, which have been destroyed through time.

The archaeological excavation took the form of 10 cm layer, and normally there were 4-5 layers of cultural layer above the undisturbed soil. The main part of the bones came from level 3, that is to say, between 20 and 30 cm below the surface.

The fragmentation has been extensive; the average weight per fragment is only 0,76 gram. The average weight of the bones possible to identify is 1.48 gram and for the unidentified fragments 0.49 gram. In other words, it is mainly the larger fragments that have been possible to identify. The degree of determination, calculated by weight, is 55%, and by number of fragment, 28.4%.

The number of species possible to identify is 12 (besides human). Cattle, pig and sheep/goat dominate, but there are also bones from cat, dog, seal, common porpoise, horse, small rodent (mice and field mouses), squirrel, hare and hedgehog. Furthermore, there were some birds, a couple of batrachian and rather a lot of fish bones. The different fish species have not yet been analysed, but there're several different species here, such as cod, herring, perch, flatfish and carp fishes and more.

The most important animals for the household are cattle, pig and sheep/goat. A calculation of the lowest number of individuals (MIND) has been made for these three species. The calculation has been made on four of the long bones, but an extension of this calculation to all bones in the bodies is possible to carried out, while the material has been prepared for computer calculations. At the

moment, the sorting of the bones has been done by hand and the calculation have therefore been restricted to the bones most suitably for calculation of consumption and of age determination.

The calculation has been done for 3 categories; young stock, half grown animals and adult animals. These method of notation concerns the development of the bones, which means the compositing of the epifys. With young stock, I hereby mean animal where the epifys not yet grown together, with half frown animals I mean young animal were the epifys is on its way to growing together, and with adult animals is meant those were the epifys has grown together.

A calculation of the meat quantities (after Lyman -79) has been carried out, with the aim to make it easier to calculate the relative importance of the three different household animals (see table 4). From the table, it is clear that 63.2 % of all meat has come from cattle, 31.1 % from pigs and only 5.7 % from sheep/goat. Concerning the age of the animal, one can conclude that all three animals have been held at the harbour, and been brought up and slaughtered on the spot.

The different parts of the bodies of these three animals are represented to a different extent, whole or parts of teeth, making up a huge portion of all the identified bones. If one exclude these teeth from the calculation, a calculation of the distribution between identified animal bones from meat rich areas of the body, and meat poor parts of the animal bodies, can be made (see table 6). For all the three species, it is a small, but clear overrepresentation of fragments from the meat rich parts of the animal bodies.

**Conclusion**

If we predict that the results from the investigation of this small portion of the bones from Fröjel harbour is representative, one can conclude, that the peoples household has been dominated by meat from cattle, pigs and sheep/goat in that order. Sheep have not been of any great importance as a meat animal, but been held for other purposes such as a source for wool and fur. The complementary consumption of animal, has mainly consisted of different species of fish.

From the point of departure in the composition of age of the three different animal cattle, pigs and sheep/goat, one can conclude, that the most realistic probability is that they have been brought up, slaughtered and consumed on the spot. Besides these animal, there have been small imports of the more meat rich parts from animals. This has been the case for all the three different animals.

**Table 1**

*Identified and unidentified material, the complete shaft, layer I-V*

| Species | Number of fragments | Weight in gram |
|---|---|---|
| All material | 23377 | 17845,9 |
| Unidentified material | 16725 | 7980,2 |
| Identified material | 6652 | 9865,7 |
| Cat | 2 | 1,1 |
| Dog | 3 | 3,1 |
| Seal | 17 | 68,0 |

| Species | Number of fragments | Weight in gram |
|---|---|---|
| Porpoise | 2 | 24,4 |
| Humans | 17 | 50,7 |
| Horse | 2 | 33,2 |
| Pig | 840 | 3421,0 |
| Cattle | 412 | 4436,9 |
| Sheep /goat | 515 | 1473,7 |
| Rodent | 4 | 0,1 |
| Squirrel | 2 | 0,7 |
| Hare | 38 | 10,8 |
| Fish | 4606 | 255,3 |
| Hedgehog | 1 | 0,2 |
| Bird | 177 | 84,9 |
| Batrachian | 14 | 1,6 |

**Table 4**
*Calculation of the amount of meat*

| Species | MIND | Average weight/animal | Total weight | % Of the tot. weight |
|---|---|---|---|---|
| Cattle | 5 | 259,2 kg | 1.296 kg | 63,2 % |
| Pig | 9 | 70,7 kg | 636,3 kg | 31,1 % |
| Sheep /goat | 7 | 16,7 kg | 116,9 kg | 5,7 % |
| | | Summary | 2.049,2 kg | 100 % |

**Table 6**
*Bone fragments from meat rich areas and meat poor parts of the animal bodies.*

| Species | Number of fragments | Out of meat rich areas of the animal | % of the totala amount | Normal share |
|---|---|---|---|---|
| Cattle | 234 | 135 | 57,7 % | 41 % |
| Pig | 426 | 210 | 50,7 % | 36 % |
| Sheep /goat | 225 | 131 | 63,2 % | 41 % |

From Berit Sigvallius determination of the bones at Fröjel, one can conclude that the animals obviously have been kept at the site, which should indicate a certain permanence of the activity in the area. In other words, it seems, as it is a question of permanent settlement in the area, even if one can guess that it was of a minor scale in the early periods, at least in the winter times.

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# A strange artifact

To get answers about the prehistoric society, we have to excavate, while written records are very few, if not non existent. But, the more we excavate, the more questions we get, even if some questions are answered through our excavations. This concerns single artefacts, as well as strange structures and constructions. Under the headline Strange artefacts, I will present an artefact, or a phenomenon that we have a problem to interpret, or in some other way is strange or divergent from what we normally find in our excavation.

I have in one of my earlier weekly reports illustrated this phenomenon of a strange, round stone with a cavity in the middle. I have received some answers by email, indicating that it obviously is an oil lamp. One almost identical stone was found during the archaeological excavations of the well-known Viking Age settlement at L'Anse aux Meadows, situated on the northern tip of Newfoundland, Canada.

This time, it it the question of an iron tool. Obviously, it is some kind of a scraper. The edge is about 4-5 cm broad, with a handle that must have been connected to a wooden shaft. The edge is clearly saw-toothed. So, far, I haven't come across anything like this tool before. As I see it, it might be some kind of a tool for dressing of fur skins, but I am not sure.

Maybe, there is someone among you readers, who have seen something of the same kind, and who knows what it has been used for.

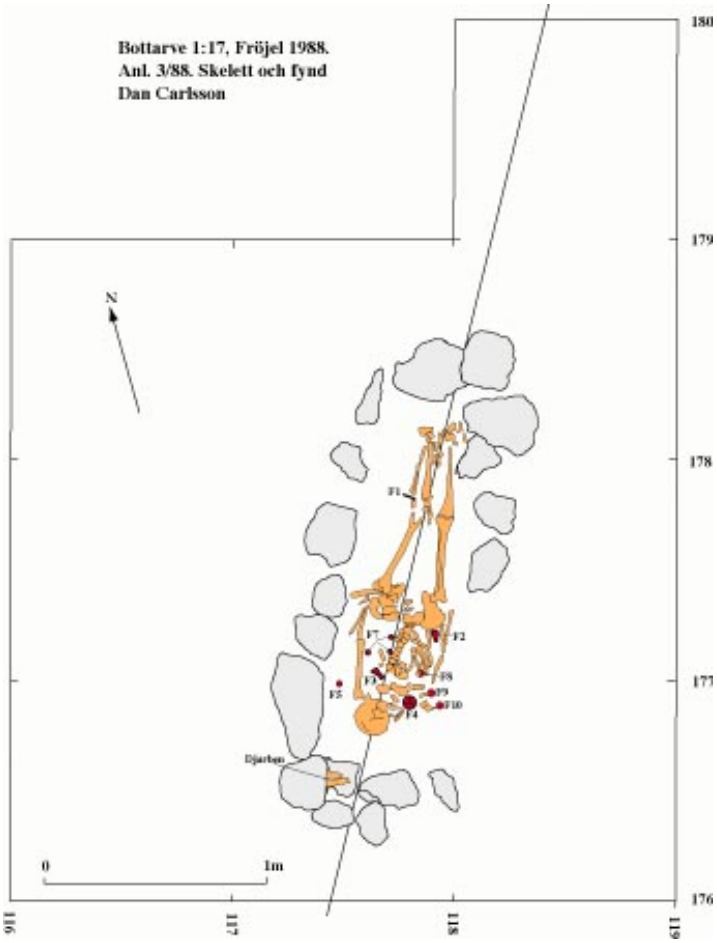
Illustration: Marie Östberg

Dan Carlsson

# A female Viking Age grave

As had been said before, we made some trial excavation between 1987 and 1990. The results from these excavations will be published in a book, which I hope will be ready in the end of the year 1998. To give a short introduction of the reader to these investigations, I will give an account of examples of results from the harbour. This time, I have chosen to give a brief outline of one of the about 20 graves we investigated during these years. It concerns a female grave. The grave contained, besides the female, also an infant. Ph.D. Berit Sigvallius has carried out the osteological investigation.

## Grave 3/88




Inhumation grave, containing a female and an infant. The grave was about 1.80 m long, dug down into the beach gravel and covered by a well-laid stone packing, north south oriented. The deceased lay on her back, with her head to the south and the feet to the north. The head was turned to the right. On the chest of the woman, a child was found.
The woman was traditional equipped with jewellery. She had a round brooch and two animal head brooches, a bronze pin, 5 beads, one corroded key of iron, an iron needle, a rivet (probably belongs to the cultural layer from the settlement), and a couple of unidentified artefacts of iron. The round brooch was very worn. It should probably be dated to "Fason D", which means the 9th century, according to Lena Thunmark-Nylén. The two animal headed brooches are of a type that dates it to the 10th century, according to Anders Carlsson 1983.

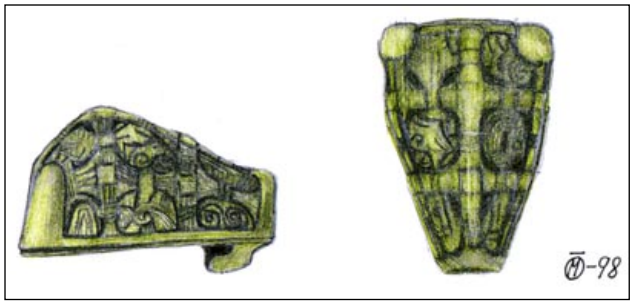
**Osteological determination:**
The grave contained two individual, one adult and one child. The adult individual was a woman, about 159 cm tall and around 44 years old. The skeleton was rather complete, but very fragmented.

Dental status: A couple of the front teeth in the under jaw were lost her lifetime, the alveolus were totally grown together. No visible dental cavities slight tartar building.
Injuries: No sign of any injuries, neither on the back, or any other joints.

The skeleton of the child, situated on top of the woman, was from a newborn child, 0-6 months old. The determination of age comes from the teeth and the development of the vertebrae.

**Find**

F1. Pin of bronze with profiled and decorated head.
F2. Animal head brooch. A part of the needle made of iron is preserved.
F3. As above. Identical as F3.
F4. Round brooch. In poor condition.
F5. Beads; all in all 5. Two of them were made of amber, three made of milk glass from which one was white and the other red and finally one brown double bead.
F6. Fragments of a small bronze chain.
F7. Knife(?)made of iron. Very corroded.
F8. A large amount of iron fragments from unidentified objects.
F9. Iron rod.



Find F2-3. Animal head brooches.

Find F4. Round brooch. Illustrations: Marie Östberg

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