



## Fröjel Newsletter, Volume 4

### Welcome!

Welcome to the fourth number of *Fröjel Newsletter*. This Newsletter is a direct continuation of the preceding numbers, where I started to give an account of parts of the results from our excavations of the Viking Age harbour at Fröjel, on the island of Gotland, Sweden, carried out between 1987 and 1990. During these years, we investigated, as has been said earlier, some 290 square metres during these summers out of a total area of some 60.000 square metres. The results from the excavations are revealed in a new book that is just published ("*Ridanäs*" - *Vikingars hamn i Fröjel*). Sorry to say, it is only in Swedish at the moment, but I am planning to have it in English in due time.

This Newsletter will deal with the beads and bead making at Fröjel. Most of the beads have been found at the trading place, but some are also from female graves. The last group of beads can be separated in two different groups. One of the cases deals with the beads found in the pagan graves found in close connection to the harbour itself. In the other case, it is beads found among the buried women at the very early, and newly discovered churchyard dated to around the year AD 1000.

If there is anything you would like to ask me, don't hesitate to contact me. Most easily by e-mail on the address below.

*Dan Carlsson*

[dancarlsson@me.com](mailto:dancarlsson@me.com)

Gotland Archaeological Field School

Arendus

### Content

Glass and beads at Fröjel - an introduction

Amber and Rock crystal

Beads from the harbour

Beads from the pagan graves

Beads from the churchyard

## Glass and beads at Fröjel - an introduction

One very important material found at many trading places from the late Iron Age is glass and beads of glass, as well as semiprecious stones and amber; material that is mostly imported and raw material for bead making most of all. The total number of artefacts found at Fröjel of this kind during the excavations between 19987 and 1990 is 319 registered numbers. The majority of the material consists of glass in different forms, as beads, glass fragments and glass smelt. Among the artefacts found, there is a small piece of glass stave, a so called millefiori stave, some 3 cm long and consisting of several staves of different colours. The remaining artefacts are distributed as follows;

Glass beads; 138

Glass splinter; 102

Melted glass; 30

Amber/raw material; 30

Rock Crystal/raw material;

Amethyst/raw material; 1 piece

Carnelian, 3, from which one is a double conic bead



*The main part of the glass beads found at Fröjel, as this rosary bead from Early Middle Ages, are found at the harbour. Beside this, many beads are from female graves, both in close connection to the harbour and to the churchyard that has been partly investigated. Drawing Marie Östberg.*

Glass beads are among the most common artefacts found in the material from Scandinavia from the Late Iron Age. Looking at the graves, it is clear that beads were most common among females.

On the island of Gotland, the women often carried several strings of beads, during Late Iron Age held together by thin metal plates with holes for the strings. Later on, in the Viking Age, from the 10<sup>th</sup> century, the metal plates were changed to have the necklaces fastened to animal head brooches.

Other ways to use beads have also been used, but the two ways mentioned above were the most common on the island of Gotland, and on the Swedish mainland. In other areas, there were other ways of carrying beads; in Latvia, for example, it was common among the women in Viking Age to carry the beads in a string around the neck, but also here it is mostly females that carry beads. But there are beads found in some graves thought to be graves for rich merchants, and the idea is then that beads under specific circumstances might have functioned as currency.

According to the Arabic writer Ibn Fadlan, the people from the Nordic countries highly glass beads, and were prepared to pay a high price to be able to make bead necklaces to their women. Beads from the late part of the Iron Age, meaning late viking Age, are mostly made of glass, but other material are also common, like amber, Rock crystal metal, lime stone and beads made of bone/horn.

Glass was not manufactured in the Nordic countries in the Viking Age. As raw material for making beads, one had to use glass splinter, or pieces of drinking horn of glass. Also mosaic pieces of glass were used for making beads. Most of the beads that we find are opaque. They look many times like they were made of clay, instead of glass. That might have to do with the process of making glass,

where glass is heated to be able to shape. If the heat is not enough high, not all the air bubbles and gases are released from the glass, making the glass opaque.

The beads found at Fröjel are all together 138. They can be divided in the following groups; Single coloured made of glass 87, multicoloured made of glass 25, amber 8, amethyst 1, rock crystal 3, carnelian 3. To these could be added 9 beads of lime stone (four made of fossils), one bead of bone/antler (rosary bead), and one of gold.



*Besides the beads, there was a small glass-made in a technic called Millefiori (a thousand flowers). The technic means, that thin and different coloured glass thread melts together, so they expose a specific pattern. When the stave is cold enough, it can be sliced into small slices, which then could be used for decoration on glass wears or glass beads.*

Of all the beads, 93 were complete or almost complete; of 4 there were 3/4 left of them; 22 were half, 11 was 1/4 preserved and of 7, there were only small fragments. Forms and colours varied heavily, as well as pattern and colour on the polychrome beads. The most common form of beads, were round, barrel shaped and slice formed, but there were also rectangular, five sided and cylindrical beads.

The size of the beads varied, from the smallest glass beads being only a couple of millimetres, to a huge, irregular formed bead of rock crystal, with a diameter of approximately 3,5 cm. Among the polychrome beads, there are 8 triangular shaped with white dots in each corner. These beads represent the most common form of polychrome beads. Otherwise, the colours and the forms of the beads are very varying.

### **Glass splinter/flat glass**

During the Viking Age, glass was not manufactured in the Nordic countries, as I mentioned earlier. Instead different kinds of glass vessels were imported, from Western Europe as well as from the Orient. Most of these glass wears ended up in the most important trading places, like Birka, Ribe and Hedeby in Schleswig. It also seems as if glass splinter too were imported, used in the local production of beads. The glass splinter in Fröjel consists of 102 pieces, made up of different colours and forms.

The pieces of glass splinter are normally rather small, some 2-3 cm in size. It is difficult by the small pieces to get an idea of the original form of the glass vessels. It's also difficult to see if some of the pieces of glass belong to the same vessel. Instead, it might be so that the import consisted of glass splinter, instead of hole vessels that has been broken. Normally, the glass splinter are missing decorations, except for one small, transparent splinter found in the central shaft. It had a star shaped pattern inscribed. One other glass splinter present a peculiarity, while it seems to have been goldplated, even if some part of the gold has flaked off. It is important to remember that the area where the harbour is situated has been cultivated for several hundreds of years, which means that some part of the glass pieces found might be late of today.

### **Glass melts**

The number of glass lumps/glass melts at Fröjel amount to all together 30 pieces. These traces are from a manufacturing process, whether it has taken place at the site or not. The glass melts consists of both transparent and opaque, meaning non transparent. They can be grouped in the following way: Black (or undeniable colour); 18 pieces, red; 4 pieces, lilac; 3 pieces, blue; 2 pieces, brown; 1

piece, transparent; 2 pieces. It should be noticed that a number of these smelts, are shallow and of almost the same size as some of the beads. Four of these smelts are red, and two are black. It seems reasonable to believe that these smelts might represent beads where the hole has been sealed of during the manufacturing process. One bead (F 4025) seems clearly to have a sign of a hole.

## Amber and rock crystal beads

The amber consists of about 30 pieces of uncut pieces. This vary in form and size, from very small fragments to bigger pieces with about half of them in the two categories. One object made of amber is a signet ring. Similar rings have been found in Sigtuna in middle Sweden and in Novgorod, the families Viking town in Russia. All signs point to that this kind of signet rings was made in Novgorod.



*The signet ring to the left is made of amber, and in one piece. The same kind of finger rings have been found in Sigtuna, and in Novgorod, as well as in Wolin in Poland. Drawing Marie Östberg.*

### Rock crystal

Among the items found are about 15 pieces of rock crystal, raw material in different size and form. To this could be added 3 beads made of rock crystal, one of them being very large and cracked (F1518), one small and round, and the last is a half oval.

What we have found at Fröjel can be compared to what was found at Paviken. Here, 4 pieces of rock crystal were found. Rock crystal can be found in the Scandinavian area, but it is more probably that the rock crystal is coming from the area around the Black Sea. It is difficult to tell if the crystal beads are of local production, but it doesn't seem unreasonable that that might be the case.

### A strange artefact

Almost every excavation mean that you run into artefacts or constructions of a strange form or character, and that don't easily be understandable. One of these strange artefacts found at Fröjel, is a 1,5 cm big, blue piece of glass, mounted in a bronze fame. Originally, it has been fasten to something, exactly what can't be decided. It resembles very much a small piece of glass of semi precious stone mounted to the so called bishops crozier found at Helgö, in middle Sweden. But it could also be a piece from a decoration to a brooch of high quality.



*This small, dark blue piece of glass with inlays of white glass is around 1,5 cm in diameter. The glass is surrounded by a bronze band. Seen from the opposite side, it is clear that it has been mounted to something, exactly what is though not known. Maybe, it is a piece of a brooch. Drawing Marie Östberg.*

## Beads from the harbour

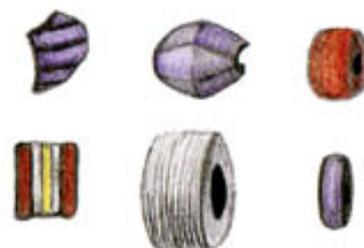
The main part of the beads that we come across at Fröjel are found in the harbour area. We have found many different types of beads, both more traditional ones in the form of glass beads and of other material as rock crystal, amber, carnelian and gold. The dating of the beads cover the period from the 7th century well into the 12<sup>th</sup> century, where the youngest bead is from a rosary. Below there are some drawings illustrating the different kinds of beads found at the harbour and trading place. All the drawings are made by Marie Östberg.



The drawings gives a view of the range among the beads found in Fröjel, both when it comes to form and colour. The main part of the beads found at Fröjel are single coloured, but there is also a rather huge number of beads with inlays of different colours. Among the beads there area few beads of carnelian, as well as rock crystal and amethyst.



Many of the beads area having a very elaborated pattern in the form of different inlays, from totally round to more rectangular. The beads area all reproduced in a little bigger scale then 1 to 1. The bead in the middle row in the middle of the picture to the right is made of Amethyst. To the left at the bottom is a fingering made of amber.



## Beads from the pagan graves

In direct connection, and to a part stratigraphically overlaid by the settlement at the harbour, is a grave field with burials from the 7<sup>th</sup> century to the 10<sup>th</sup> century. Here are both cremation graves and inhumation graves. The osteological analyses of the graves has shown that it is almost exclusively female graves, even if there is a certain number of male graves, as well as children.

The female graves are as a rule very well equipped with jewellery and other artefacts, according to the customs of the time in question. Several of the females had got beads with them, from a few to a huge number. In contrast to the beads discovered in the settlement area, these beads are directly connected to a single person, which gives us a good idea of the use of the beads at that time. We can in other words get a rather good idea of how the beads were used, and combined together.

It then can be noticed, that the combination of beads is very "uneven" if one can say so. There's for us no obvious system in the combination of beads. How we are to understand this, is of course unclear, but it would be interesting to compare the situation concerning the combination of beads with how beads are used today among so called primitive cultures, where the beads have another meaning than just being decorations. In many cultures, different beads were carried for different purposes, as for protection against evil spirits, or for good luck etc. It is probably in this perspective we should see the strange combination of beads among the females at Fröjel.

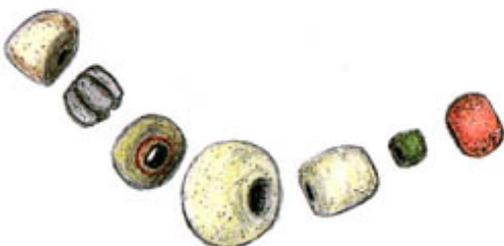
To illustrate the situation at Fröjel, I want to show the beads from some of the female graves at the harbour. The first (to the right) is called grave 1/87). The woman had with her 3 beads. The one to the left is a huge glass bead of a type that is



supposed to have been imported from the Orient. The other two are polychrome glass beads of a more traditional type.



The female in grave 2/87 to the left, also had very few beads with her, and also of a very different form and colour.



To the left is grave 4.87. This woman had 7 beads in her necklace. They are all of very different character, and it doesn't seem to be any symmetry among them. One of the most varied necklaces was found on a woman in grave 24.89. Three beads are of a very similar form

and style, two of the being almost identical. There is a kind of symmetry in the necklace in that way that some beads occurs in par's. Remarkable is the very big melon shaped green glass bead in the middle.



The lower picture to the right illustrates an enlargement of the two black beads with inlays of other colours and patterns. Photo Dan Carlsson. All drawings are made by Marie Östberg.



The beads below belong to some persons buried in grave 1.90. In this case, it is obviously the question of two men. The grave was very destroyed and stirred. It is rather common that men also have beads, but normally they have fewer beads.



## Beads from the churchyard

Close to the old school and the teachers house, and about 150 metres from the medieval church in Fröjel, we found in connection with our archaeological excavations one so far unknown churchyard. A trail excavation 1990 revealed that the area hosted inhumation graves, where the dead had been placed in simple wooden coffins and with the head in the west and the feet in tiger east, indicating a christian way of funerals. During 1998, we carried out new excavations in the area. This time we made a more extensive investigation to try to find the limit of the supposed churchyard.

All together, we investigated some 140 m<sup>2</sup>, north of the schoolmasters house, in connection to an area were a grave was investigated back i in the 1930,s. Below a 0.3 m thick culture layer, we found about 40 graves, without question a churchyard. The churchyard was in the north demarcated by a foundation for a wooden fence, probably in the form of upside down planks.

The dead had been placed in narrow wooden coffins, in some cases hold together with nails. There were though other coffins without any nails, probably hold together by wooden pins. The graves were placed in raw, and to a very limited

*In Olsson's kitchen garden, there was an extensive churchyard. all together, we discovered some 40 skeleton. They were all placed in an east-west orientation, and buried in narrow wooden coffins. Some of the persons, they were all women or children, carried bead necklaces. Photo Dan Carlsson.*



extension disturbed by later burials. There were though some exceptions from this, specifically in the northern most part of the cemetery, the part close to the former fence surrounding the churchyard.

The buried persons consist of both adults and children. About ten of them had been furnished with some jewellery, mostly in the form of beads, but also an animal head brooch, dress pins, fingerings and a comb of bone. The objects can be dated to the 11<sup>th</sup> century. An osteological analyses carried out by Carola Liebe-Harkort shows that all the persons are women and children. That is logical why we are on the north part of the churchyard, and thereby north of the church. In early medieval time, the north side was used only for the female.

Some of the deceased are equipped with artefacts from Late Viking Age. One woman had an animal head brooch and a dress pin of bronze, dateable to the 11<sup>th</sup> century. Another woman has a beautiful double comb and a third two blue, melon shaped glass beads.

Remarkable was the woman who had been placed in reversed position. She had her head in the east and her feet in the west. She didn't seem to have been buried in a coffin, and she had, in contrast to other, obviously been buried in her clothes. Besides a couple of beads, she also had a pendant made of a silver coin struck for the English king Ethelred around the year 1000.

The cemetery seems to be from around the year AD 1000. We don't know how long time the churchyard has been used, but it seems plausible that people have been buried here until the new church was built on the cliff above, and that happens around AD 1160.

Some of the women had bead necklaces. Throughout, they had more beads per individual than the women at the pagan cemetery down at the harbour. There was a remarkable difference among the beads. They had beads of rock crystal and amethyst, as well as of shells from the Indian Ocean. Below, there are some examples of bead necklaces from the churchyard. All drawings are made by Marie Östberg.

*Grave number 6 from the churchyard. The necklace consists most of all of ten shells from the Indian Ocean. They are rather common on Gotland during the later part of the Iron Age. The other beads are small glass beads of different colours.*



The necklace to the right belong to the woman in grave 26. It's a remarkable difference between the beads, from a small yellow glass bead to a very big and beautiful bead of amethyst. The third bead from the left is a so called gold foiled bead, that is that one has put a thin layer of gold under the transparent melted glass.



An extensive and very colourful necklace belonged to the woman in grave 36b. Besides a great number of ordinary glass beads, she also had a couple of gold foiled beads. But also a faceted bead of rock crystal and a bead of amethyst of the same form as in the grave mentioned above, but of smaller size. All the beads in the drawings are shown in about scale 1:1.

