Editorial

RECONSTRUCTION of pre-historic remains is always a hot topic with various angles of approach being put forward. Several articles in this issue continue this interesting discussion.

Let’s start with the very special reconstruction of the boathouse at Avaldsnes in Norway, see photo on the front page. The discovery of the exceptional remains of a Viking-age boathouse in 1990 opened up a new discussion concerning prehistoric boathouses. Here two articles allow you to follow the reconstruction process and the thinking behind it.

A Viking-age boathouse needs Viking ships! This time we are glad to be able to treat you with two stories of two famous Viking ships namely Ísleindur and Havhingsten fra Glendalough. Ísleindur is the replica of the Gokstad ship that sailed across the Atlantic Ocean to North America in the year 2000, and now the captain let us take part in that voyage. Read also some personal impressions from the launch of Havhingsten in Roskilde last September.

Closly related to reconstruction is experimental archaeology, which is an academic "hands-on" method used especially to find out more about how objects were produced in ancient times. New research regarding Viking-age techniques of bronze-casting has lately been realized in Denmark. We are very proud to be the first to publish the results of these experiments.

So questions concerning quality, authenticity and purpose are most important when it comes to re-creating and displaying prehistoric objects and facts. And Viking Heritage Magazine will continue to cover this theme in issues to come.

I wish you all an enjoyable read!

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Editor

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About the front page

The reconstructed boathouse at Avaldsnes on the island of Karmøy, Norway. Read more about it on page 3–7. Photo Karl Johan Gundersen.

Words of Wisdom

The coward believes he will live forever  
If he holds back in the battle  
But in old age he shall have no peace  
Though spears have spared his limbs.

From Hávámal  
(Words from “The High One”)
The Building of a Boathouse at Avaldsnes on Karmøy

In the waters between Karmøy and the mainland of western Norway lies a small island. Over the past eight years, a Viking farm has been reconstructed here at Avaldsnes comprising a collection of buildings from the Viking Age. During 2004 a new reconstruction has emerged; a large boathouse some 32 by 15 meters now stands finished by the sea.

The original boathouse
The original boathouse was discovered during construction work at Rennesøy in Rogaland.

The area consisted of two banks not seen so easily on a grassy plain some 2.5–3 m above sea level. In 1991 an investigation was carried out reaching the conclusion that this was the remains of a boathouse dated to between 1030–1220. Evidence pointed to this being a boathouse constructed to hold a large warship, part of a nationwide defence of the coast.

Planning
In connection with, and as part of the Viking farm at Avaldsnes, it was decided that the boathouse from Rennesøy should be reconstructed and placed on the shoreline adjacent to the farm.

An archaeologist and building engineer, Jochen Komber, who worked at the Archaeological Museum in Stavanger at the time, was engaged to begin planning and drawing the reconstruction.

Jochen is an experienced archaeologist specialising in building construction, and has a long history of both working with and drawing plans for several buildings from the Viking period in Scandinavia.

This project was exciting, as it would incorporate several groundbreaking building techniques. A row of angled posts on the outside of the building were to be used as roof timbers giving the building the very special form of an inverted boat hull, and this is in fact the image which is experienced when seeing the building for the first time.

Building responsibility
Once the plans were ready, the project was presented to four construction companies who then discussed various methods of construction based upon these drawings. The Didrik Heried building company, certified by the Norwegian
Riksantikvar (Central Board of National Antiquities), was given the project and so the building could commence.

The first job was to construct a scale model, which would help with the building process.

The first part of the construction process was carried out at the firm’s own site. This was then taken apart and transported to the island by boat. This method saved a good deal of time and expense during the project.

At several points during the project, meetings were held to discuss details of the process as there was a great deal of pressure to construct a building as authentic as possible.

Tours were made to several old buildings in West Norway to study techniques and methods that could help in the project.

In the beginning it was decided that the roof timbers should be curved prior to assembly. This was to be achieved by steam bending.

The process was discussed at length, and eventually it was decided that it would be both too time-consuming and expensive. The final decision was taken to use thin trunks of straight grown pine, which were left round in section and bent into shape with ropes.

This method proved to be successful with the result that only two of the trunks snapped during the process. We did not achieve the degree of curvature that was planned in fact, although the end result was satisfactory.

The sections were then anchored to each other using wooden plugs.

Roof
The roof is covered with horizontal planks of pine, the evidence of this technique being the roofs of old Norwegian stave churches. On these the first roofing layer is constructed this way and there is evidence that this was indeed the original outer roofing of these buildings.

The planks overlap one another and are secured with galvanised boat nails. Here we could have used handmade nails but, again, the cost would have been excessive.

The underside of these planks had their

The roof planks overlap each other and are secured with large boat nails.

The doors are too small to allow a large ship to enter, but the entire front can be removed to let the ship in.
growth wood removed so that only the heartwood would be exposed to the elements.

Between the planks and joins, a strip of felt was inserted, which had been dipped in tar to ensure a watertight join. The lengthwise joins of these planks were sawn at an angle in two planes. This was a method we found used in a medieval church in Hordaland. Finally the building is treated with a coat of tar, a well-known ancient technique for both roofs and walls.

At ground level a row of stones were laid out vertically, the reason being that a great deal of water gathers at this point and this will greatly increase the life of the building.

Usage
Now the building stands finished we can look forward to using it. To date we have no Viking ship to fill this space, but this may change in the not-to-distant future. As of today, we are in possession of a reconstruction of the largest of the Gokstad ship follow-boats, and this will occupy the building during the winter.

The entrance doors were originally planned to be large enough to allow a large ship to enter, but later this was redesigned and now it is possible to remove the entire front of the building to allow access for a large Gokstad-size ship.

The building’s primary use will be arranging events like Viking banquets and other activities such as exhibitions and concerts. The building has great potential with a calculated seating capacity of around 250.

A modern kitchen has been installed at one end of the building ensuring that modern food and hygiene regulations can be observed and followed.

Adjustments
There have been some variations in construction that do not follow traditional methods from the Viking period. For example the posts of the building were not dug into the ground as was the original. This was done to combat the problem of the posts rotting. The area around this building is constantly wet as it lies barely above sea level.

As an alternative they were placed on large stones, however this is hidden in the final construction and thus not detrimental to the aesthetics of the construction.

The decision was also taken, on financial grounds, not to axe the surfaces of the roof planks again. The planks were used as delivered, with a rough sawn finish.

Under the wooden floor at either side of the building, a metal pipe system has been installed. This will be connected to a smaller building, which will house a diesel-burning heating unit with the capacity to deliver around 80kw of warm air into the building. This has been installed to allow for a greater use of the building during the autumn and winter months.

At the north end of the building we have chosen to install a modern kitchen. This is hidden from the main hall by a wall, and is of course necessary in a building, which is to have the possibility of serving food. Being self-contained from the main hall will make the life of both the cooks and serving staff much easier.
Introduction
In 1990 remains of a boathouse were found on the island of Rennesøy close to the city of Stavanger in Norway. According to datings this boathouse had been in use during the Viking Age and in early medieval times. Its ground plan showed a surprising interesting feature. This was the first time that outer buttresses were reported from an Iron-age boathouse in Norway.

This discovery opened up a new discussion of the problems of reconstruction of prehistoric boathouses in general. Considering the shape of known prehistoric Iron-age boats, transverse beams connecting and stabilizing the construction from the inside could not have been used.

The roof
Some boathouse digs reported two rows of inner roof-bearing posts, but these at a distance of up to between 5 and 6 meters, which was quite a lot for a three-aisled building from that period.

In most cases roof-bearing posts were absent and the roof was assumed to have been held up by only the outer walls. Therefore, the Iron-age boathouses were generally assumed to have been constructed with a simple rafter roof without any transverse beams.

The main problem in this respect, however, is or was how we (or the Iron-age architects) could handle the enormous lateral forces at the lower end of the roof.

Excavations of several Iron-age boathouses revealed up to two-meter-thick earthen walls outside the outer walls. There is a certain possibility that the pressure from the roof was transferred to these earthen walls, either by the roof resting directly on these walls, or by the roof resting on wooden walls which in their turn leaned against these earthen walls. In either case, the earthen walls had to be considered as necessary static elements in boathouse construction.

This is a rather primitive construction considering the level of craftsmanship reported from other archaeological data and it is also contradictory to the general assumption that the Iron-age buildings in Scandinavia were purely wooden buildings which in themselves were statically stable.

All outer walls, whether built of stone, turf or earth were interpreted as being purely elements of insulation and were assumed not to have had any static purpose whatsoever. In this view the construction of prehistoric boathouses remained a mystery.

A stable construction
In view of the results of the Rennesøy dig, we could solve the problem of reconstruction of a purely wooden building for the first time.

The actual space for the boat was limited by two rows of roof-bearing posts which formed a trapezoidal ground plan, 6 meters wide at the entrance and narrowing to 5 meters at the rear end of the building. The two rows of outer buttresses followed extremely convex lines, resembling a kind of spiderweb or fan.

At both ends these buttresses stood at an angle of 50º in relation to the main construction, while in the middle of the building the buttresses were perpendicular to the line of the roof-bearing posts.

Beyond the rear end of the actual boathouse there was a kind of annex with a triangular ground plan ending in a point. This annex had no outer buttresses. Seen from above, the ground plan of this boathouse resembled more a projection of an insect than a house.

Without a doubt this fan of buttresses...
reflects an extremely stable construction. Such a measure might have been necessary considering the size of the building and the climatic conditions in that area.

Furthermore, 90% of the buttresses pointed directly towards a roof-bearing post. This fact makes it very conceivable that each buttress together with a roof-bearing post formed a constructional unit. Completed by a horizontal beam at their lower ends, these three elements in turn formed statically stable triangles. The existence of these horizontal beams is highly likely due to the absence of cultural deposits in the lateral aisles of the building.

Discussion
From an engineering point-of-view the assumed buttresses should meet the main construction as high as possible above the ground. The quest was to find a reasonable explanation for the fan-formed setting of outer buttresses in relation to the more or less rectangular main room. There is none.

As long as we interpret this fan-formed array as traces after buttresses, their convex arrangement in relation to a straight roof makes absolutely no sense. It is therefore more reasonable to assume that the convex formation mirrors the placement of the roof rafters which in this interpretation extended down to ground level.

Furthermore, assuming that this was the case, we could not use straight rafters, but have to imagine that they were bent inwards. Otherwise the ridge would lie unreasonably high above the ground and we would end up with a concave ridge line.

Bending the rafters inwards towards the house, the ridge line will be convex, thus reflecting the convex lines on the ground. In this view the bent rafters will form a double curved shell which requires only modest dimensions but nevertheless makes a very stable construction.

Shell constructions like this are not, as many might assume, a modern invention but were built by many pre-industrial cultures all over the world. In view of the rather primitive tools these cultures had developed, it is also more natural to assume that they preferred to use lighter elements in their house construction.

The roofing is assumed to follow the rafters down to the ground. In this case inner walls are not necessary. Walls were only needed in the triangular annex behind the real boathouse. The horizontal beams connecting the lower ends of the roof-bearing posts and the rafters could be imagined to have supported a wooden floor a few decimeters above the bottom of the boathouse, serving as a dry platform on which to work and place the cargo from the boat, when drawn inside the house.

Conclusion
The interpretation of the archaeological data thus resulted in a special construction indeed, which provided much space by using only very few constructional elements and which was very resistant to the hard weather prevailing in that area. In addition the architects also managed to re-shape the main house form inherent to the Viking culture in this boathouse.
Casting

BY KEN RAVN HEDegaard

In this article, for the first time, new research results regarding the Viking-age technique of casting are published. Among them are some of the materials used for the production of masters, moulds and crucibles. And actually how difficult was the making of the Tingelstad brooches?

Introduction
For more than fifteen years I have been working with prehistoric bronze-casting techniques. In this article I will concentrate on the Viking-age trefoil brooches. It is my goal to give those who are considering to work with Viking-age metal casting encouragement and, for those who have already started, help in solving some of the problems involved with this work.

At the end of the article I would also like to call attention to an almost totally neglected prehistorical raw material resource.

The Original Material
How these brooches came to Scandinavia in the first place in the late 8th century AD is in itself a fascinating story. But on this particular subject I will refer to my colleague Iben Skibsted Klæsøe’s article “Transformation” in Viking Heritage 4/2000.

Findings of moulds for trefoil brooches are much rarer than original moulds for other contemporary jewellery. Well known examples are the abundant finds of used moulds for tortoise brooches in Ribe (Denmark) and the Black Earth (Svarta Jorden) in Birka, Sweden.

The best known finds regarding moulds for trefoil brooches are from Hedeby in Schleswig. But in the more recent years mould fragments have also appeared in the Norwegian Kaupang excavations. From Hedeby we also have excellent finds of masters for trefoil brooches.

The few moulds by no means indicate that the trefoil brooches were not a common Viking-age brooch type. As a matter of fact in its time it was the most common female cloak brooch, together with the straight-armed brooch, and we know them not only from numerous finds but also in astonishingly many variations, sizes and, not least, qualities.

Making a Master
If a Viking-age bronze caster decided that he wanted to start producing trefoil brooches he would have to start by considering what material he should make the master in. Now the easiest way to solve this problem would be to get a trefoil bronze brooch from the hands of another bronze caster and copy this brooch by pressing it into fine slightly damp clay and then pouring molten beewax into this matrix.

Modern man would call it cheating! But it was an accepted way to proceed in those days. However the copies would always be considerable smaller than the original – as not only the beewax and the clay moulds shrink – but even metal shrinks as it solidifies. Add to this that the more delicate ornamental details of the copies would seldom look as good as those on the original. This method has its limits.

But in order to make a new variation or an enlarged trefoil brooch a new master is needed. I will here list some of the options and the pro and cons:

Beewax:
Plus – can be shaped in amazing ways – often the only possibility for very plastic
work. Combines well with certain other model materials like wood and leather – in this way a master can be further detailed and given raised ornaments – but at the same time retain a solid overall structure.

Minus – no good for pressing or cutting large surfaces of delicate entrelac patterns. A bit difficult to remove the master from wet loam without damage. Breaks like glass when too cold, goes soft and sticky when too warm.

One can choose to let a complete wax-master remain in the mould and use the lost wax method. But as the name of the method indicates, your waxmaster will melt away due to the later firing of the mould! However by sacrificing a waxmaster you can create a very useful bronze-master!

**Bone/antler:**

*Plus* – can be reused again and again as a master. Lets go of the wet loam without too much trouble. Finds with bone-motif pieces tells us that bone was indeed used a lot.

*Minus* – just one small error in cutting the master means you have to start all over. The shapes of bone puts some limits on what you can make. Does not combine that well with beewax.

**Wood:**

*Plus* – easy to work with and woodworking was a strong feature in the Viking culture. Combines well with beewax. A wooden trefoil brooch master would be perfect for regular sand-casting, however there is no proof of the use of this casting technique in Scandinavia before 14th century AD.

*Minus* – it can be a bit tricky to remove from the half-dried loam-mould. The master is prone to swell.

**Leather:**

*Plus* – very easy to work with. In no time you can press complicated entrelac patterns as leather can be made ductile. Leather was a favorite master material among the Anglo-Irish metalworkers. Will combine well with beewax.

*Minus* – not very durable. Might swell after some use blurring out the decorations. Used alone it gives only flat ornamental backgrounds.

**Lead:**

*Plus* – lead masters are easy to remove from multipiece moulds. Several original lead masters are known to us.

*Minus* – lead is very poisonous. The greasy lead does not combine well with beewax. To make a elaborate lead master you have to cast it – so you are back to the problem – what to make the first master out of?

If I were to make a master for a very small trefoil brooch with flat but delicate ornamentation, bone would be my first choice. If I intended to produce less than five small to medium-sized brooches with flat uncomplicated geometric ornamentation like Jan Petersen’s type 93, I would go for leather or maybe wood. But for a medium-size or large brooch with flower/plant/animal decorations, in more than five copies; I would try to create a lead master or even a bronze master. For large multipiece trefoil brooches like the Tinglestad types (JP type 115) I would have to make at least the small very plastic-shaped animal figurines in wax. I could get away with making the backplate in wood. It would also be easy to make in wax.

Nearly all the masters I have made during my time making trefoil brooches have been in wax. But this is honestly due to wax being a material that I am used to working with. An exception was the backplate of my first Tinglestad brooch, which was a combination of wood and wax.

But after having experimented with lead masters for JP type 89 I have to conclude that because of the flat outlay of trefoilbrooches – this must be seen in a Viking-age context – lead masters are much more preferable. Mainly if massproduction was the aim. For unique single production I think the lost wax method would be the preferred way to proceed.
Moulds and Crucibles
Casting a crude trefoil brooch in a soapstone mould is not impossible. But no finds so far would indicate that this was done. Nor do we have any finds of solid bronze moulds for trefoil brooches. What we do know though is that they were cast in mainly two-piece clay moulds.

Actually the main content of these moulds was horse or cow dung, fresh from animals at pasture. I prefer horse dung, but I am sure cow dung was used more in the Viking Age. You also need hair – horsehair is good, but human hair works fine too. The clay has to be free from lime and as fine-grained as possible.

Then you need some chamotte to temper the mixture. Here you reuse old used moulds (crushed pottery when no old moulds are at hand). I normally go for a mixture of 50% dung, 35–40% clay, 8–12% chamotte and some 3% hair (ca. volume). If in doubt, add more dung and hair, not more clay.

After this is mixed (bare feet do the job best) you take out a small portion which you mix with an equal amount of fine clay. This new portion is for the thin inner layer (ca. 2 mm thick) in the mould that is to take the impression of the finer ornamentations (“ornament-loam”). The first mixture is referred to as “regular mould-loam”. You also need a third portion of mixed loam. In this case it may contain coarser clay and sand. This last portion is for joining (“armouring-loam”) the multipiece moulds together later on.

It is best if the new loam-mixtures are allowed to mature in a pit for a day or two. But it has to be used and fired within three weeks. Any longer and too much of the organic material might have decomposed. The idea with the organic material is to have a highly porous mould after the burn-out. These moulds do not need any airvents for the metal gases, and indeed all the original finds show no airvents.

To make the crucibles much less organic material is needed (max. ca. 25%), but a lot more chamotte. The chamotte should come from crushed old used crucibles; as much chamotte as one possible can mix in must go into the clay. If there are no old crucibles around, sand can be used. The high content of sharp-edged crucible-chamotte will make it difficult to shape the crucibles and these...
must have as thin sides as possible.

In the Viking Age this problem was solved by forming a small ball of grass or hay. This was pressed into the half-finished wet crucible with a finger. At the same time the bottom of the wet crucible is held in the slightly rounded palm of your other hand. This grass-cushion greatly helps to give the lower sides and bottom of the crucible an even thickness. Traces of grass can be seen on the inside of the original crucibles.

Many original crucibles have a tap on the side. This will be a help when the crucible is held by a pair of (thin almost tweezer-like) thongs for the casting.

But the taps have more important functions! First they help stabilize the crucible in a slightly slanted position in the melting pit. The tap must point towards the opening of the tuyere. The bottom of a Viking-period crucible is always round and is likely to tilt when the glowing charcoals start to shift. Secondly the tap will disperse the heat applied to the crucible, so that "welding-holes" can be prevented (or at least delayed).

These clay crucibles are not truly fire-resistant! Sometimes they will have to be repaired with a new layer of loam after just one casting, but normally you can get three to four castings out of one good crucible.

**Forming the Moulds**

The masters are put on a flat piece of wood. If these masters have incorporated taps for needle-rest and holder, then holes will be drilled into the wood to take these taps. It helps to draw the general outline of the planned mould with charcoal.

If the lost-wax method is planned one first builds up a layer of fine ornament-loam right unto the fixed wax model and then later mould-loam. But with a solid lead or bone master you first form a 2–2.5 cm thick plate of mould-loam and into this you rub 2–3 mm of fine ornament-loam. Let the plate dry for a few hours – it should not be too soggy – and then press it down carefully over the master.

Next day turn over this new mould piece with the master still embedded in it. Cut or press some negative guide taps along the edge of mould piece. Now you build up the other part of the two-piece mould. A little ashes between the two mould pieces will prevent the layers fusing together.

After another day (depends on size of mould and the weather) the half-dried mould pieces can be taken apart and the master removed. Here we must not forget the sprue. Using the lost-wax method one should have a well-fixed wax-sprue on the model from the start.

Using a solid master you have the option of cutting the sprue in the half-dried mould later. The sprues are conical. But many original crucibles have a tap for placing moulds just prior to casting. Notice size of bellows.

**Casting**

The most important factor for the Viking period bronze-caster was the quality of his charcoal. Badly burned charcoal can have too much resin in it, which will produce sparks and you will have a hard time getting the temperature that you need.

The quality of the metal is naturally also an issue. From the relatively few metal analyses made so far on copper-alloy material from the Viking Age we see that brass was preferred. But this brass often had a content of tin, lead and even a little silver too.

The following alloy is a good example of a Viking-age bronze-caster would have tried to obtain. But remember that he only had colour and ductility of the metal, the colour of the metal gases and a set of scales to go by!

To get this rather exact alloy at every casting was impossible for a bronze caster in the 9–11th century AD.

**85% Cu, 7% Zn, 4% Sn, 1–2% Pb, 1–2% Ag – rest could be Fe**

This alloy would be good for casting the thin tortoise brooches or trefoil brooches. An commonly used alternative would be an alloy richer in zink. Quite a few trefoil brooches were cast in silver.

To establish a Viking-age melting workshop does not call for much. Castings were done in the open, sometimes protected from rain by a makeshift shelter with just one or no wall.

At the Fyrkat Ringcastle in Denmark a melting pit had been set up inside one of the long houses. But it does not appear to have been used for work over a prolonged period.

You need a normal-sized open fireplace to burn the moulds and the crucibles in. Here you use regular small chopped logs. In such a fireplace you should be able to reach 700 degrees Celsius. It helps if you fan the fireplace now and then. Moulds for trefoil brooches will have to fired for 4 hours.

Then you need a melting pit. I like to work with pits lined with fist-size rocks. My pits are normally ca. 30 centimeter across and some 20 cm deep. At one side
the tuyere or “avlsten” is placed. This can be made from the same loam mixture that is used for the crucibles, but soapstone can and was also used as tuyures.

Air from two bellows are led into the pit though a conical hole (end-diameter 2.5–3 cm) in the tuyure. Each bellow must be able to take a minimum of 50 liters of air. More is better. You need a melting pit that can produce 1200° Celsius. To reach this temperature a prolonged steady flow of air and good quality charcoal are needed.

An average medium-sized Viking-age crucible would take 140 to 180 grams of liquid copper-alloy – more than enough metal for casting a trefoil brooch type JP 89 including sprue, maybe even two smaller brooches. However with this small amount of brass/bronze you only have ca. 5–10 seconds at your disposal to do the actually casting!

A tiny sandpit to place your mould in just prior to casting is also a good idea.

A good bronze-casting team requires three people. One to tend the melting pit and to do the casting. One to tend to the fireplace with the moulds and to prepare these for casting and one poor soul to work the bellows. The first meltdown of a working day (due to “cold” pit) will take some 15 minutes, later you can do it in less than 10 minutes.

There is much more to casting than the above. The only way to learn it properly is to have somebody with experience show you how to do it. Basic casting is not hard to learn, but it can only be taught in the field.

Coldwork
It is easy to cold-work the surface of a trefoil brooch using the punsels, engravers etc. This is because of the flat backs of these brooches, flat backs give good support for your work and there is always coldwork to be done after your casting. But the coldwork subject I will leave for another article or another author.

The Tingelstad Brooches
There were attemps to make more elaborate trefoil brooches. Some were guilded and tinned. Some have niello inlays. Inspired by the double-shelled tortoise brooches there were also attempts to have the ornaments separately casted and then riveted onto large trefoil brooches later. I think here of the group of Tingelstad trefoil brooches (JP type 115). But a closer look at these reveals that all have very shabbily-made ornaments, compared to other trefoil brooches like the JP type 95 or JP type 98!

The Tingelstad brooches meant more castings to finish just one. But it seems to me that they did not demand special skills of the average craftman, just more of his time and raw materials. But once the ornaments are riveted on; these Tingelstad brooches do appear fantastic because of the contrast between the raised perforated ornaments and the sometimes guilded flat surface underneath. But remove the attachments from the backplate and the magic disappears.

Reusing Moulds
You can only cast once in a multi-piece clay mould! The better the casting the more you have to smash up the mould to liberate the raw casting. After just some ten castings the bronze caster is kneeling among a mess of broken mould fragments and one to three discharged crucibles. To clear working space one has to get rid of this.

The crucibles are like stoneware and could in theory survive lying on the ground for another thousand years. But the light and porous mould fragments are quickly trampled into small fine grains, unless these were dumped into moist pits like what happened in Ribe and the Black Earth in Birka. Some of the old moulds and crucibles are put aside for reuse as chamotte in new moulds and crucibles. But we are still left with a heap of fragile mould fragments!

In 2004 I conducted an experiment together with my colleague Jana Kruse. She is an expert in making Tatinger ware. We had long suspected that old used moulds would make a top grade grog/chamotte for tempering pottery. It was tried out at the Viking Museum at Borg on Lofoten and later again at the Museum at Trelleborg in Denmark.

The results were amazing! The fine porous grains from the broken moulds binds so well with any kind of clay and gives a smooth workable loam. That the grains have been fired, but only briefly,
Jana Kruse testing the quality of pottery tempered with chamotte produced from used bronzecasting claymolds.

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We should regard old moulds as a potentially desired resource of raw material for a prehistoric potter. Alas the domestic production of pottery in early Viking-age Scandinavia was not at all as extensive as it had been in the preceding historical periods. With more enterprising potters around in 9th century Ribe, for example I am sure that much less mould fragments would have ended up in pits. Lucky for us who are studying the Viking-age casting techniques!

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A sketch of a runestone in the Moesgard Museum, Aarhus, Denmark, depicting a fearsome mask to frighten evil spirits from a fallen Viking. We offer this dramatic piece as a brooch or pendant.

Literature:

All photos are by the author, except the original trefoil brooch type JP 98.
The Gotlandic Althing and the Cistercian monastery in Roma

By Majvor Östergren

The organisation of the Gotlandic society

The organisation of the Gotlandic society during the Viking Age and early Middle Ages was based on **things** (20 in total), three **tredingar** (thirds) and six **sättingar** (sixths). The highest governing body was the Althing or Gutnaltinget, which consisted of 20 thing judges presided over by a chief judge and, following the introduction of Christianity, even the three **tredingar** deans.

Prior to Christianisation the Althing was not only the highest judicial and administrative unit but also the highest religious body, which means that the place where the Althing was held would also have been the most important cult place. Thus Gotland constitutes a parallel to the Icelandic social structure during the corresponding period. Possibly both go back to an all-Germanic structure with certain regional differences but common basic features.

The Swedish royalty and the Bishop of Linköping diocese seem to have had a relatively little effect on Gotland and the Gotlanders. For example there were no royal officials on the island. Gotland was not included as part of the king’s royal tour of the country either. The Bishop in Linköping did not have the right to certain taxes that he had on the mainland nor part of the “tenth” either. The tax burden was low.

Moreover Gotlanders had their own mint, introduced about 1140 AD and which was clearly implemented under the auspices of the Althing. The leading social class consisted of the independent farmers and it is most likely that the Gotlandic thing decisions originated exclusively from this social class.

The Althing’s location at Roma

The Althing’s location in Roma parish is supported by a German translation of Gutasagan from 1401 (see VHM 4/2004 eds. note) and has been generally accepted by researchers, just like the view that the Althing was of vital importance for the establishment of the Cistercian monastery in Roma.

However there has never been any concrete proof that the Althing had its meeting place in just Roma. Not before 1990, when the author noticed some interesting information on the cadastral map of Roma parish from 1699, at the same time as a couple of archaeological surveys shed new light on the history of the Roma monastery.
special land areas adjacent to the Thing site.

The Althing was probably held around midsummer every year and would have collected a big number of people and even animals that were brought along, e.g. horses. People gathered to discuss important matters of common concern, made sacrifices, and decided about marriages, planned trading voyages and engaged in trade.

It is tempting to compare this with the description of the Icelandic Althing, where the equivalent to the Gotlandic Thing, godordet, had their own special houses – sheds – for accommodating their thing-men. These sheds were owned by the “godarna” – the equivalent of the Gotlandic Thing judges – but rich and otherwise influential persons could have their own sheds. According to the description in the Icelandic Sagas, these sheds were located at a certain distance from each other.

It might seem rather odd that the things also had a share in the bogs at the Althing place, but on one hand, the wetlands have always been important for grazing and the animals also needed pasture while the Thing was being held, while, on the other hand, the bogs can also have provided straw thatch for the things’ sheds. Moreover during the Viking Age, the bogs were actually lakes, forming large connected water systems, which meant that they were also important as navigable water routes.

The archaeological surveys
In the spring and the autumn 1990 a couple of archaeological surveys were undertaken with the aid of metal detectors in the fields around Roma Kungsgård. In the so-called Gold Field Guldåkern (the field got its name during 19th century, when three gold coins were found there) northeast of the monastery and north of the ancient Kräklinge Thing meadow a find was discovered which indicated that the place must have had a special function. It was not a typical find from a ploughed-over Gotlandic farmstead. Instead it gives the impression of having originated from a trading place, reinforced by the way the objects were spread out in the field. The objects have been found scattered over an area of 200 x 300 meters with certain concentrations.

However the presumed trading place doesn’t seem to have had any great extent of the activities so typical for these places, like bronze casting. There are few bronze smelts and casting cones are missing. On the other hand, several parts of pieces of silver were found, a small silver bar, a bent finger ring of silver, just over 20 silver coins (mainly fragments of Arabic coins) and just over 40 weights. The weights are of varying shapes and age but most of them are polyhedral (multi-sided).

It is fully possible that the find material from Guldåker is a sign of a trading place located directly adjacent to the Gotlandic Althing’s meeting place during the Viking Age. The finds indicating trade (like fragments of coins and weights) originate mainly from the 10th century.

Yet another survey was carried out in a field that was earlier part of the Kräklinge Thing meadow. Here, in a concentrated area, Viking-age objects of a different nature than the objects in the Guldåkern were found. The find material can probably be linked to the remains of a typical Gotlandic settlement from mainly the Viking Age, but also the Vendel Period. Among the objects are two fragmentary silver coins, a piece of melted silver, whole and parts of bronze jewellery, bronze bars, a bronze casting cone and 12 pieces of melted bronze, that is a relatively rich trace of remains from making bronze handicrafts.

Linking the Althing to Roma monastery
It is probably no coincidence that the Thing names exist just within Roma monastery’s domain and that the monastery is situated right next to the Thing names.

The monastery was probably established in the year 1164, according to Yrwing, on initiative of or in consultation with the Gotlandic Althing, and for that very reason was situated at the thing site.
The Althing was not only the highest administrative and judicial body, but also the highest religious body. It seems natural therefore that, after the introduction of Christianity, it is also the Althing that takes the initiative in building a church (which is clear from the Gutasaga) and establishing the monastery.

Moreover Gotland with its leading position within the eastern sea trade ought to have been of particular interest to the Cistercian order. The Cistercians were known to be great innovators involved in the most important enterprises in the regions where they established themselves.

Yet another strong link between the Althing and the monastery is the name of the monastery itself. The original name that the monastery received when consecrated was obviously Guthnalia, which is a latinisation of Gutnalting, meaning the Gotlanders’ Althing. The monastery would hardly have received that name had it not been located in right next to the Althing meeting place.

During the Middle Ages, concurrent with the development of the town of Visby, the political power on Gotland was divided between the Althing and the town, while the county council was gradually weakened. Finally, during 15th century, the Althing in Roma had had its day. The power now lay completely with Visby’s burghers and the Danish sheriff in Visborg’s castle.

**The Gotlandic Althing’s meeting place – common land?**

It is possible that the area at the present Roma Kungsgård has served as a kind of common ground, where the 20 things had the right to use certain special land areas as well as parts of the bog. Within these areas – named after the things – there was pasture for the horses and houses built for accommodation while the thing was in session. From the Icelandic Sagas, we know that each farm was represented with several persons at the Thing. Therefore there could have been several thousand people who gathered at Roma every year.

However it is possible that the things did not each have an area with their own “sheds”. Since only Burs and Kräklinge Tingsängar are known, it might very well be that only the Sixth (sättingar) (Bro, Burs, Hejde, Hoburg, Kräklinge, Rute) had areas with “sheds” and that the things within each sätting had to share the areas.

The Cistercian monastery ought to have been erected on the Althing’s common land and probably in close proximity to the site for the Thing proceedings. Exactly where the Thing site
The history that disappeared
Searching for the Viking-age histories in Vestfold, Norway

BY TERJE GANSUM & LARS UELAND KOBRO

The Viking ships from Gokstad and Oseberg are known worldwide. These finds were incorporated into written history and many believed that the interpretation was safe and sound. But a silent revolution took place inside academia and history was rewritten. The old and well-known history disappeared. How do we deal with this experience in Vestfold? Is it really a loss?

The map presents names of regions which hosted leaders who played central roles in the changing power structures around 900 AD (After Myhre & Gansum 1993:98). The networks of loyalty were personal and death and change of interests made the social system unstable. Investment in death rituals may be seen as one strategy to rearrange the network.

The backdrop
Archaeology and history draw upon different sources when creating their images of the past. Sometimes they paint a picture and fill in colours where the canvas seems pale. This cooperation in creating The Great Norwegian Past has been supervised by historians. Written sources have had supremacy.

The Viking ships from Gokstad and Oseberg are famous, but that they originate from barrows in Vestfold is not that well known. Barrows of turf and clay preserved these two marvellous ships, but

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not all barrows preserved equally well. At Borre the ship had decomposed due to poorer conditions for the preservation of wood.

It is evident that these barrows with ships represent aristocracy in one way or another. Such graves are not randomly spread in geography or situated just anywhere in topography. Therefore it seemed natural to search for kings in the written documents and sagas after the graves were excavated in 1852, 1880 and 1904 and combine the sources when creating the national history.

The story that was told for ages and also presented by Sveaas Andersen in 1977, was that Harald Finehair started his campaign in Vestfold, the home of his father Halvdan the Black. The sagas, especially Snorri Sturluson's Ynglingasaga, give Vestfold a prominent place in the building of the Norwegian kingdom.

After World War II, the Nazis' use of symbols and their narrow interpretation of heroic histories led knowledge of the Viking Age into discredit. Much of the scientific work on major political issues in the Viking Age was tuned down. Archaeologists studied artefacts and historians did not spend much effort on the Viking Age. The period was a historical backwater until the late 1980s.

Ironically the old national history synthesized by Andreas Holmsen, pre-World War II, was kept and reproduced in schoolbooks and in university literature until the mid 1990s. How can we explain that? Part of the answer is that the old story was celebrated and escaped scientific critique because of the vital position the Ynglingasaga and the Ynglingatal poem fulfilled in the mythological origins of the making of Norway.

In 2005, Norway celebrates its 100-year anniversary as a sovereign national state. Seen in a long-range perspective, 100 years is a short period. Many connect Norway with an ancient history beginning with the Vikings. This shows us that historians and archaeologists successfully launched the building of national identity in the period 1880–1939. An important part of this history has been analysing the conquest, focusing on how one warlord, King Harald Finehair, got control over the coast called Norway (the route to the north). He became The King and his family the only one that could recruit kings.

The revolution from within
In the late 1980s scholars of history and archaeology started to question the old history. Did Harald Finehair really start his campaign in Vestfold?

Claus Krag, a history professor, analysed the Ynglingasaga and the Ynglingatal poem and concluded that Harald’s stronghold was on the southwestern coast of Norway. Krag formed a maxim: The younger the written sources were the more Harald became implanted in the history of Vestfold. The older written sources told quite a different story of Harald and his forefathers, linking them to Sogn and Rogaland.

Krag was not the first to interpret the sources in this way, but such interpretations were ignored and marginalized until the late 1980s. There was no mental room for this alternative story, which questioned and therefore offended the accepted national history, with a capital H.

At the same time, early 1990s, archaeology professor Bjørn Myhre wanted to find out if the chronology of the barrows did in fact match the chronology of the written sources. He concluded that there were reasonable doubts as to whether Harald’s sons were actually buried in the barrows in Vestfold.

Some of the grounds for the old story was weakened, and scholars raised more questions concerning the process of unification of the areas that were to
become the kingdom of Norway. And, not surprisingly, critical voices were raised in the southwestern part of Norway. In Rogaland scientists were invited to come and contribute to new perspectives on the Viking-age period, which resulted in a series of books. The international approach widened the narrow national excesses in interpreting only written sources, and transformed the regional historical identity by moving the royal family of Harald Finehair to Rogaland and Hordaland.

Even in Vestfold there was a critical examination of the barrows and what roles they were given in the interpretation of Viking Age. Much effort was put into investigating how the old story could survive in academia. The mythical origins of the Norwegian kingdom had to be politically protected against criticism, because mythical “logic” cannot withstand the critique based on scientific “logic” because these types of logics are incommensurable. The Norwegian history was to be pure and simple, easy to grasp, so people could be proud and quote their poems and sagas.

The backlash of national history
Vestfold lost the story of Harald Finehair who led the conquest of Norway and become sovereign king. Vestfold lost the major role in the creation of Norway, and even worse, much of the time Vestfold was part of Denmark during the Viking Age. Could it be worse?

Oh yes, the latest news is that Kaupang was founded by a Danish king and that the Osebergship, our national pride was probably made in Denmark! The Danish kings are now given a central role in the interregional history of Viking Age in southwestern Scandinavia.

How do people in Vestfold react to the fact that the history they knew and believed in has disappeared? The old and experienced audience is shocked and feel misguided. All their knowledge seems worthless. Teachers at schools are torn between the loyalty to good old books (“the truth...”) and the authority of the scientists who tell new stories.

Changing times – changing frameworks
Let’s be frank, the old story did not disappear. It just moved from Vestfold to Rogaland. The story got a new “home” and new material facilities and is being well taken care of. The grand history is based on a historical framework, and archaeological material has been added to support and materialize the story.

Seen from Vestfold’s point of view, the grand history is gone, but the archaeological finds are still here and need to be explained. In Vestfold we have to create as much knowledge about the Viking Age as possible and, especially with regards the extraordinary ships’ graves, to tell stories based on an archaeological framework instead of the historical one.

There seems to be a great challenge to tell stories of Viking-age Vestfold in the years to come. New investigations of the original documentation and scientific research into towns, settlements, ships and graves give us input to write the new interregional history placing Vestfold in a European context.

Njáls saga
Njáls saga is the longest of the Icelandic sagas, probably originating in the 13th century, but its names and happenings still influence present-day Icelandic names and culture.

Here the saga is revised and retold with a focus on its principal characters and main happenings. The classic lines and pungent saga tone have been preserved and complemented by colourful illustrations, and spiced with interesting facts and glossary explanations. Learn about ancient manuscripts, weapons, burial mounds, social aspects of Viking society and many other tidbits of information from Njál’s period. This book is meant for a younger audience but makes an excellent introduction to the world of Icelandic sagas for the uninitiated adult reader! At present it is available only in Icelandic (www.ebba.is) and Swedish (www.berghsforlag.se).

New book!
Retold by Brynhildur Thórarinsdóttir
Illustrated by Margrét E.Laxness
Translated from Icelandic to Swedish by John Swedenmark

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Much has been written about the Norwegian connections to the isles to the west, but archaeology has not focused on eastern connections obvious in written sources. In the famous find from Borre there are several items that have eastern parallels, amongst them the draught harness and the scabbard confiscation (After Myhre & Gansum 1993:28-29, 35).
Braslav Lake District
– in the Viking epoch

By Alexander Yegorejchenko

Braslav district
The Braslav district is located northwest of Belarus on the border of Latvia and Lithuania. Its relatively small territory of about 2,200 square kilometers is characterized by the contrasting changes of relief – from the flat area in the south to the hills in the center and north. Its greatest attraction is the numerous (over 200) picturesque lakes interconnected by small rivers, which comprise the West Dvina river basin.

This region was inhabited in the Mesolithic period but there were few Stone-age settlements. The hilltop settlements appear in the late Bronze era.

They are the only type of settlements found until the first century AD. In the Viking period they were often used as a kind of lookout to control waterways around the West Dvina, which was known as part of the route “from the Varagians to the Greeks”.

Dirhems
Some hidden treasures of Arab coins, dirhems, were discovered along this trade route although they are not evenly distributed along the West Dvina. The greatest number of dirhems was found in the vicinity of the towns of Vitebsk and Polotsk.

But there are no such treasures further west towards Braslav. According to V. Ryabtsevich’s supposition, this is explained by the absence of big trade and craft centers in that district, meaning that the merchants passed by that part of the route without any stops.

Only three dirhems have been found in the Braslav district. Two of them were discovered accidentally in 1869 near the Vidzy Yard estate. Both of them were minted during the rule of the Abbasid dynasty. One of them bore the stamp of caliph Kharun Al Rashid (who ruled from 786 to 809), and the other of his son caliph Al Masun.

The only dirhem with a precise location and layer was found during excavations near the hilltop settlement of Ratunki. Unfortunately it has only one-side averse coinage, which had been poorly preserved. Nevertheless it can be supposed that the dirhem were minted in Samarkand during the rule of the Samanidis around the second half of the 9th century, according to Ryabtsevich.

Viking-find places
Several facts can prove that the Vikings were not just traveling along the West Dvina but were actively investigating and exploring the Braslav Lake district.

Cremation remains in a pottery urn covered with an iron neck hoop were investigated in one of the burial mounds near Uklya Lake, 24 km west of the West Dvina. An ivory pierced amulet with the stylized head of a beast was found near the urn.

Another grave, presumably that of a Viking, was discovered near the settlement of Opsa. A buckle, a knife and four small weights were found near the cremated bones.

The hilltop settlement of Maskovichi
The most sensational discoveries connected with the Vikings were made by L. Duchits during the investigations of the hilltop settlement of Maskovichi situated on the shore of Dzerba Lake...
which is part of the system of Braslav lakes connected with the West Dvina by the Druika River. That hilltop settlement appeared during the Stone Age but most of the discoveries are related to the 10th–13th centuries including numerous jewelry ornaments, items of Christian worship, arms and work tools.

More than 100 animal bones with carved runic drawing and signs have been found there. Alongside the drawings of separate people, fighting men as a rule, there are some descriptive scenes as well. One of them depicts two men fighting with swords. The second one portrays a man in a chain armor and helmet with a sword in the right hand and a shield in the left one. In the background you can see a boat with a man-of-arms nearby. The third bone shows a boat with two stylized figures separated from the group of people by a cross.

Judging by some characteristics, specialists define the bones with letter signs as a young medieval runic alphabet from the 11th–14th centuries. It is supposed that these inscriptions were left by the descendants from Scandinavia who became Slavonic.

Other finds from the 10th century give direct evidence of the presence of Vikings at the hilltop settlement of Maskovichi. The most impressive is a shoulder fibula. An expedition from the Belarusian State University has been conducting excavations of this hilltop settlement since 1999. A series of old Russian items not belonging to ordinary people have been found alongside the findings from the late Bronze and Iron Ages, which dominate here, including a bronze writing instrument, some glass bracelets, and ivory chess figures. One more carved bone with the runic letter either “M” or “R” scratched on it is connected with the Viking epoch. It was discovered in the same layer as the Arab dirhem.

The Zazony settlements
An interesting complex, including a hilltop settlement and an adjacent settlement, is situated near the village of Zazony. Its excavations were also carried out by the Belarusian State University expedition.

The hilltop settlement existed at the end of the 2nd century BC – to the beginning of the 1st century AD. People continued living in the settlement during the 5th–10th centuries and used the hilltop settlement as a refuge.

For the first time on Belarus territory a perfectly preserved 14-sided little weight was discovered right under the turf during the investigations. It is made of a non-ferrous alloy and its weight is 4.25 grams. In the center of each triangular side there is a single hollow, and the rectangular sides contain a dot contour on the edges with 6 imprints on each. Outside Scandinavia similar exsamples have been found in Old Ladoga in the 10th century layer.

About the author
Alexander Yegoreichenko, PhD in History, is the Head of the Department of Archaeology and special historical subjects in Minsk, Belarus. His area of expertise is the archeology of the late Bronze Age and Iron Age in the forest zone of the Eastern Europe. He is the author of one monograph, two volumes of the four-volume set of “Archaeology of Belarus”, more than 70 scientific articles and 69 encyclopedia articles.

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Vikings join in Iron-age Chieftain’s Feast

Not only people of today are interested in the past, a few weeks ago a whole party of Viking re-enactors arrived at the Iron-age farm of Gene in northern Sweden to participate in a re-enacted Iron-age party!

The fifth partner meeting of the Destination Viking Sagalands project
It was quite a spectacular experience having re-enactors dressed in Viking costumes meet other re-enactors dressed in Iron-age costumes at the reconstructed Migration-period farm of Gene close to Örnsköldsvik in northern Sweden.

We, the guests, were taken on horse-drawn sledges over the frozen lake across to Gene. There the Chieftain of Gene greeted the visiting Viking chieftains and we were all invited to take part in the big feast in the great hall of the longhouse.

Here we were served excellent food and drink, and throughout the evening stories were told. The local chieftain and his wife even performed a juggling act with candles on the ice.

The reason for all this is that Gene Fornby is a partner of Destination Viking Sagalands project, and the fifth partner meeting of that project was being held in Örnsköldsvik.

Although Gene is not a Viking village, they have focused primarily on storytelling and creating local sagas in their public presentations.

Gene Fornby
The reconstructed farm itself lies below the original site. The original site was excavated from 1977 until 1989.

Prior to the excavation of the site it was thought that Scandinavians colonized the Swedish province of Ångermanland only during the Viking Age. This site demonstrated that colonization had taken place some 800 years earlier.

Due to the remarkable elevation of the land, around 1-centimetre annually, the original site, which was once located close to the shore, now lies far from the seashore. The sea was 18 metres higher...
when the farm was in use.

The reconstruction was placed close to the current shore, however, so that you can feel the close relationship between farming and fishing that once prevailed here.

The prehistoric farm is run by a foundation of national, regional and local parties. Today the living history aspect is probably the most prominent and visible, but throughout its history Gene has also been a site for experimental archaeology. Experiments are still being carried out. Quite recently, the pit house for flax weaving was completely rebuilt, based on experiences from actual use. The new construction is much lighter and more open than the first attempt.

The reconstruction of the farm started 1991. Today the farm consists of a longhouse, a barn, a large smithy and the pit house.

Sagalands as a marketing brand

The Sagalands meeting itself addressed a number of vital questions. The most important ones concern the future and the continued development of the network and its products. Sagalands is gradually emerging as a powerful marketing brand. The new Sagalands map will strengthen this, as will the Sagalands book to be published soon. The project intends to present these products at the upcoming West Norden Travel Mart in Copenhagen later this year.

The project also addresses the question of product quality. Here, both re-enactment and saga and storytelling are important elements, and the group includes a number of specialists in these areas too.

In connection with the meeting, the group also visited the High Coast, an area with the highest elevation of land in the world. This area became a World Heritage area in 2001.

We also visited the Regional Museum of Västernorrland County. Here we were guided through a new and interesting exhibition on the subject of land elevation. Mr Bertil Nordin from the rock-art centre at Närmsforsen gave us an introduction into this exciting world of Stone and Bronze-age carvings.

**Summing up the results**
The time is now approaching to sum up the results of the Sagalands project and take a look at the future.

The project has been working along three main lines
- living history and establishment of Saga trails
- revival of story telling
- marketing of the Sagalands as a concept and tourist destination.

Several partners run reconstructed Viking-age villages, and a number of measures have been taken to ensure continuous quality improvement there. Several partners have also signposted Saga trails in their areas. In addition, several partners have produced leaflets and booklets to promote understanding of important sagas.

There have been a number of story-telling courses, story-telling events and even storybooks published.

The marketing of the Sagalands concept is well underway. An illustrated Sagalands map is under production, as is an illustrated Sagalands book. The latter describes all partner areas, departing from a Saga story and linking it to places and landscapes in the area.

For each of these three priorities, separate working groups have been established, and they will present updated suggestions for the future development of the network and the Sagalands concept at the upcoming project meeting on the Faroe Islands in July 2005.
The Viking ship *Icelander* was first put to sea off the coast of Reykjavík, Iceland, on March 16, 1996. It was built to sail across the Atlantic Ocean to North America in the year 2000, in commemoration of the 1000-year anniversary of Bjarni Herjólfsson and Leifur Eiríksson’s discovery of the New World.
A replica of the Gokstad ship

The *Icelander* is a replica of the Gokstad ship, which was discovered in Norway and is believed to have been built around the year 870. It is 23 metres long and 5.25 metres wide at midship, and its hull is 1.96 metres deep. The construction of the *Icelander* took roughly one year.

During the Viking Age, it only took a single winter, or 7–8 months, to build such a ship, no matter how large it was. A ship of this size is referred to as *16 sessur* – a 16-seater – in the Icelandic sagas, referring to the 16 pairs of oars it accommodated. Its crew numbered some 70 men.

An educational vessel

The *Icelander* was operated as a sort of educational vessel until the year 2000. At that time, 11-year old school children were invited, in groups of 25–50 students at a time, for a two-hour sail out into the bay off the coast of Reykjavík.

All in all, some 1800 school children sailed with the *Icelander* on these educational trips, which included lectures on the ship itself, Viking ships in general, and the historical background of the Viking Age.

This hands-on experience provided a stimulating and timely addition to the children's school curriculum, as 11-year old Icelandic pupils study Iceland's Age of Settlement and are introduced to the Icelandic sagas in their history classes.

The millennium voyage

On 17 June 2000, the *Icelander* set sail from Reykjavík and embarked on its long journey to Vinland, now known as Newfoundland. It was fitting that Reykjavík should be the point of debarkation, as it is believed that Reykjavík was indeed the place where Iceland's first settler, Ingólfur Arnarson, set foot on land in the year 874.

The *Icelander*'s millennium voyage to the New World began, however, with a sail to Leifur Eiríksson's birthplace in Hvammsfjördur fjord, on the west coast of Iceland, in order to pay well-deserved tribute to Leifur and his people.

After this stop in Hvammsfjördur, the *Icelander* departed en route to Greenland, and the journey westward to North America began in earnest. The author of this article, Gunnar Marel Eggertsson, the builder of the *Icelander*, served as captain, and I was accompanied by a crew of nine experienced sailors. The voyage went exceptionally well. The ship and crew were blessed with good weather, and we met with only three or four stormy periods all the way to New York.

Sailing a Viking ship

It may come as a surprise to the layman that passengers aboard a Viking ship enjoy an unusual amount of comfort at sea. Under all but the most extreme circumstances, the ships do not lean when the sail fills with wind. The *Icelander*’s sail measures 130 m². When navigating under full sail, the sail actually helps to hold the ship upright and still so that it will not heel over.

In general, Viking ships are structured and designed to sail downwind. This notwithstanding, it is a mistake to assume that Viking ships are unable to sail into the wind. The Gokstad ship, for example, has many features that prove its ability to sail upwind.

The *Icelander* makes excellent progress at a 45-degree angle into the wind, achieving speeds of up to 6-8 knots in a 20-knot wind. But it is most pleasant to sail downwind, for when the wind is behind the ship the air on board is virtually still.

As is well known, the hull of a Viking ship is open all the way down to the keel; there is no deck as such, only a network of loose planks and crossbeams. I am of the opinion that Viking-age shipwrights had the specific aim of designing their boats so that they would keep the sea out. Indeed, this is exactly what happens if the crew handles the ship properly.

In my own career, I have had extensive experience in sailing Viking ships on the open ocean, having sailed the equivalent of two trips around the globe. During all these journeys, my crews and I have been faced with all sorts of conditions, but the ship has never been flooded with seawater to any degree that could be considered remotely dangerous, though an inevitable spray drizzles over all ships as they sail into the wind.

And on a humorous note, they say that a frightened sailor with bucket in hand is the best pump that one can have on board! Actually, rain is the seaman's worst enemy and has always been so, but I will come back to this later in the story of the *Icelander*’s voyage westward.

Greenland

The *Icelander*’s journey to Greenland was eventful and anything but trauma-free. When the ship approached the southern tip of Greenland, we were locked in by ice. This could be chalked up to a misunderstanding among the crew, that had to battle for a good 10 hours, with life and limb at stake, in order to get the ship out of the ice unscathed.

The *Icelander* ran aground on icebergs, rocking up and down intermittently in such a way that I suspected holes had been punctured in the hull, and I was afraid that ship and crew were about to sink into the ocean then and there.

But then it was revealed incontrovertibly that the man who designed the Gokstad ship over 1100 years ago knew exactly what he was doing. To watch this age-old hull design buckle, bend, twist, and more or less bounce up and down in its life-and-death dance with
that ancient enemy – pack ice – was simply unbelievable. And it was a proud captain who discovered, after a detailed inspection, that the ship had emerged from the crisis virtually as sound as the day it was built.

The Icelander was entirely undamaged – merely bruised, if one can call it that – after this battle that demanded the unstinting skill and tenacity of both ship and crew. To survive such an ordeal on a vessel designed in the year 870 by a genius whose name, unfortunately, we will never know – was an experience that is nothing short of awe-inspiring.

There was an elaborate ceremony when we arrived at Brattahlid, the farm belonging to Eiríkur the Red and his wife, Thjódhildur, who were the parents of Leifur Eiríksson and his siblings. A number of dignitaries – including Greenland’s home-rule governor, Jonatan Mosfjeld, and his wife; Queen Margarete and Prince Henrik of Denmark; and Icelandic President Ólafur Ragnar Grimsson – boarded the Icelander and embarked on a two-hour sail around Eiríksfjörður fjord after the reception ceremony.

Prince Henrik, who is well known for his skill at handling modern sailboats, asked to be allowed to take the helm and was astounded at how close to the wind he was able to sail the ship.

On the morning of the Icelander’s departure from Greenland, the crew went to Thjódhildarkirkja – Thjódhildur’s church – and had a quiet moment there to pray for good weather and good sailing on the way to Vinland.

The church is a replica of the one Eiríkur the Red’s wife, Thjódhildur, had built after she converted to Christianity around the year 1000. According to a famous legend, Thjódhildur refused to sleep with her husband unless he also converted. Eiríkur the Red took a dim view of such an ultimatum, however, and dug his heels in.

The church itself is so small that it requires a stretch of the imagination even to call it a church. The word chapel may be a more accurate term, though perhaps it doesn’t matter much to God what people call their houses of worship. (Read more about Thjódhildur’s church in VHM 4/04, Eds. note.)

L’Anse aux Meadows
In the Icelander’s case, it seemed as though the crew’s prayers were heard because, immediately upon our departure from the coast of Greenland, impeccable weather and wind conditions met the ship. A northwest wind of 15–20 knots followed us all the way to L’Anse aux Meadows in Newfoundland, some six-and-a-half days away. Another celebration, with a crowd of spectators 25,000 strong, met the Icelander in L’Anse aux Meadows.

Never before had such a large group of people congregated in this secluded place. Among the guests at the ceremony were a large number of dignitaries from the participating countries.

The Icelander’s subsequent ports of call in Newfoundland included 10 harbours, where the crew and ship received an unforgettable welcome. By the time we left the island and continued on our way to Nova Scotia, we had met so many wonderful people that it was with heavy hearts that we stepped on board to set sail for Halifax.

While we were in Newfoundland, a crew of 45 people with trailers containing

Reykjanes Peninsula
On Reykjanes peninsula, about a 20-minute drive from Iceland’s Leifur Eiríksson International Airport, ruins of a Settlement-age farmstead have recently been discovered. It is considered quite likely that this farmstead belonged to the great-grandfather of Bjarni Herjólfsisson, the first European to set eyes on the American continent.

It will be certainly intriguing to keep abreast of developments as this site is excavated – this site that probably played a vital role in Europeans’ discovery of North America.

In fact, Reykjanes is a very interesting place for many reasons. Very near the airport lie the geological boundaries where the American and European tectonic plates meet. The city of Reykjanesbaer has erected a bridge spanning the boundary between the two plates, thus enabling the visitor to walk “from Europe to America” in a minute’s time.

An interesting aside is that the newly discovered Settlement-age farm belonging to Bjarni Herjólfsisson’s great-grandfather is on the American side of the boundary!

The Viking ship Icelander is housed about 30 minutes from the international airport. Visitors to Iceland cannot avoid driving past the building where the Icelander dwells, as the road to Reykjavík passes right by. Those who are interested in seeing the ship are welcome to contact the author using the phone number or e-mail address below.

This year, construction will begin on a building where the Icelander will be the centre of attention, surrounded by the Viking exhibition that the
people were indeed there around the year 1000. It was as though the people who built these houses 1000 years ago stood there beside us, clapping us on the shoulders and saying, “Yes, this is where we were – a thousand years ago.” It was a remarkable experience that will never desert me, and if one thinks about the time that has passed since – a thousand years – it is interesting to ponder the fact that people nowadays often live to the age of 100. By that count, it only takes a row of 10 such individuals to stretch back to the time when all this was taking place. It is, in fact, uncannily close to us in time.

On the way to New York
We visited a total of 25 harbours on our way to New York. The sailing down the east coast of North America went very well except for the link from Newfoundland to Halifax.

Due to thunderstorms, we arrived at Halifax harbour a full 24 hours late. It rained so hard that the pumps on board_Icelander_ had to work at full tilt in order keep up with the flooding on board. All this was accompanied by high seas and gale-force winds, not to mention the eerie and unforgettable lightning that illuminated the sky for most of the night before our arrival at Halifax harbour. By this time, the crew had had more than enough, but all ended well, and everyone was ineffably relieved to rest once we had docked at Halifax.

All 25 stopovers had been scheduled long beforehand, even down to the time of day, and there was no question of doing otherwise than honouring that schedule. The_Icelander_ managed to stay on schedule in all cases except this one: the delayed arrival in Halifax.

Presidents, queens, kings, and their entourages, together with large crowds of spectators waited for the arrival of the Viking ship. And our voyage certainly was successful in reminding people that it was Scandinavians who were the first Europeans to arrive in America some 1000 years ago.

As we approached New York, we were slightly surprised at just how many people seemed to know about our impending arrival in this city of millions. People stood on the banks of the East River and waved to us, and the crowds grew larger as we neared Manhattan. Both captain and crew were filled with an indescribable sense of celebration and joy when we saw that we were just minutes from completing this long and difficult project.

The reception and ceremonies in New York were warm and sincere. The crew’s spouses and other relatives waited there to reclaim their loved ones after the four-month voyage. After all, there had been no guarantee that we would arrive alive and well at our journey’s end – no more than one is guaranteed to cross a city street in Manhattan without mishap!
The Viking Age – which period are we referring to?

By Sven Rosborn Fotevikens Museum

Dividing the time
When the author began studying archaeology at Lund University in 1970, the academic norms were widely different from those applicable today. Consider, for example, how the time division between prehistoric times and the Middle Ages was dated. Archaeological studies in Lund at that time were being conducted at Lund University’s Historical Museum, a splendid three-storey building just north of the cathedral.

This museum is one of Scandinavia’s oldest archaeological museums and studies in both prehistoric and medieval archaeology were being pursued here. The time division was crystal clear. If there were any questions concerning prehistoric times it was the concern of the second floor – the Middle Ages was dealt with on the third floor.

During one of my first visits I had a question concerning Lund cathedral. The question was asked in the office on the first floor. The answer was immediate: “That’s after 1066. You want two floors up!”

The three period system
Giving time periods a distinct division has a long tradition. The first to present the three-period system, i.e. the Stone, Bronze and Iron Ages, was Thomsen, a Dane, the son of a successful merchant in Copenhagen, in the beginning of the 19th century. The young man had become interested in archaeological finds. When the Danish state decided to lay the foundations for an archaeological museum, the merchant’s son was given the task of taking responsibility for the items in the museum. At the time these lay in one enormous pile in the loft of the 17th century Trinitatis church, better known in Copenhagen as “the Church with the Round Tower”.

What actually confronted Thomsen when he first entered the church loft? In his own words he shares this encounter with us. Archaeological items were scattered around everywhere: “in dust and disorganised disarray, hidden away in chests and baskets, amongst bits of material and paper. It was total chaos … and no one was responsible for them any longer.”

Thomsen’s lack of knowledge of scientific literature in combination with his own sense of order resulted in him organising the collection in his own way. The system that had been practised in his father’s warehouse was now put to use for these archaeological items. They were all packed, carefully examined and classified, i.e. sorted into different groups.

Today the systematisation of any scientific material is a matter of course but in the beginning of the 19th century this was quite revolutionary. The greatest problem confronting Thomsen was to decide which groups they should be divided into. In a letter written to the professor of history, J.H. Schröder, in 1818, he gave an account of the system he had chosen.

The collection was divided into three historical phases with heathen times as the oldest. Heathen times were then divided into a number subdivisions, such as: 1: tools and stone weapons, 2: metal and

The giant Finn in the crypt of Lund Cathedral – a true Viking. The sculpture was carved before Lund became the archbishopric for Scandinavia in 1103.
copper weapons and battle equipment e.g. bronze horns (!), 3: iron items, 4: household items, 5: decorative items, 6: cultural items, 7: cinerary urns and 8: other items.

In the first three groups Thomsen had collected items of stone, bronze and iron. However, he was still unclear as to whether these groups represented a definite time line extending from an older to younger period. To begin with the grouping was only a practical means of sorting the items. As soon as they had been placed in their respective groups they were put on exhibit.

In the year 1819 the citizens of Copenhagen could, for the first time, wander up the spiralling pathway in the Round Tower to visit the new museum in the church loft. The young museum curator had placed items of stone, bronze and iron respectively in three separate rooms; thus the museum became the first in the world to use these later classical time divisions.

From the very start, the museum proved a great success. The young curator was appointed “kancelliråd” by the king, something that rarely happens to a present day museum curator following a collection reorganisation.

Research advanced quickly. Each age was divided into sub-periods, e.g. the Bronze Age was sub-divided into six periods where period I represented the oldest Bronze Age and period VI the youngest.

Within the youngest Iron Age period in Sweden, the Vendel Age and Viking Age concepts were conceived. The Vendel Age, which covered the period of approx. 550 –800 A.D., was thus named after the discovery of the funeral ships found in the vicinity of Vendel church in northern Uppland.

The commencement of the Viking Age was set at the time of the first known Viking raids. These acts of violence befell the monastery of Lindisfarne on the northeast coast of England in the year 793. The end of the period is attributed to Harold Hårdrådes’ failed Viking raid in England in 1066.

Dating the Viking Age

However, during recent years these time divisions have come under question. At the large Viking exhibition in Florence in 1990, that the author was given the opportunity of being responsible, unique grave finds and other finds, such as the golden men from Bornholm were exhibited, which are attributed to the 8th century. No doubt these and other magnificent finds from this century cast a new light on the initial phases of this period of high culture that came to be known as the Viking Age.

In addition, it has been established by year-ring dating that the building of Danevirke, the impressive defensive wall system constructed all the way across Jutland in Denmark, had begun during the early part of the 8th century. This clearly proves that a large well-organised and powerful Nordic society already existed one century before the time traditionally attributed to the start of the Viking Age.

Ending the Viking Age with an unsuccessful Nordic conquest attempt on England in 1066 has also been questioned. As far as Scandinavia was concerned, this incident was of little or no significance. Therefore at the large Viking exhibition in Paris a few years ago, the transition between the Scandinavian Viking Age and the Middle Ages was placed as late as the start of the 13th century, a time division which perhaps could be considered as being quite far advanced.

At the exhibition in Florence, the author suggested instead a year both more exact and relevant, namely 1103. This was the year that Lund was appointed as the archbishopric for the whole of Scandinavia. Previously the archbishop of Bremen-Hamburg had held the responsibility – but now the pope considered the people of Scandinavia to be so Western-orientated and sufficiently mature to be responsible for the organisation of the Nordic church themselves.

Therefore the traditional time concept for the Viking Age should be stretched somewhat. With its start in the 8th century and its ending in the year 1103, the period would better correspond to the domestic circumstances that existed in Scandinavia during that time.
Living Vikings join other Living History museums in a new *liveARCH* project

**Text by Geir Sør-Reime,**
consultant to *liveARCH* project and consultant for the Destination Viking projects

**A new Interreg project**

Recently, a number of Living History museums convened in Biskupin in Poland to discuss a new Interreg initiative called *liveARCH*.

The initiative springs out of the EXARC organisation, an organisation for living history museums established a few years ago at the initiative of the late Thomas Johansson.

The idea was first launched at the EXARC annual general meeting in Barcelona this spring. In the meantime, a small working group has developed the project idea. A draft application was presented to the delegates at the recent EXARC meeting in Biskupin.

**Biskupin**

Biskupin is a village in Eastern Poland where a fortified lake settlement dating from the Younger Bronze Age and the Early Iron Age has been reconstructed. With around 250,000 visitors annually, it is one of the major cultural heritage attractions in Poland. The major excavations at the site took place immediately prior to WWII, and were excellently documented in photographs, now widely displayed at the site and in the nearby site museum.

**The *liveARCH* project**

The idea now is to have a three-year Interreg IIIC networking project with the intention of establishing a broader and more visible organisation for Living Archaeology after 2008. The *liveARCH* project itself will run from 2005 until 2008.

The main objective of the *liveARCH* project is to improve the visitor experience at all living history museums. The visitor will be the focal point of the project: how can we improve our museums to offer top quality experiences and attract more visitors?

The project will comprise components dealing with the didactics of re-enactment performances, visitor expectations and behaviour, quality awareness and quality improvement, as well as the quality of reconstructions, clothing, personal equipment, tools, staff skills etc. A series of staff exchanges between living history museums will also be organised as part of the project.

A number of the Living History museums that already have signed up for the *liveARCH* project are Viking Age villages. Several of them are also partners in the Destination Viking Living History project, including Fotevikens Museum, the leading partner of that project.

The project is open to any Living History museum in Europe working with any prehistoric or historic period.

The *liveARCH* project is being coordinated by the Open Air Museum in Eindhoven, Netherlands, and the contact there is Mr Roland Paardekooper. He can be contacted at r.p.paardekooper@hccnet.nl

**Viking Stories**

Shetlanders have a strong connection to their Scandinavian past and Viking roots and this is reflected strongly in the storytelling traditions of the islands.

This slim volume, written by Davy Cooper on behalf of Shetland Amenity concerns a small part of this tradition, which is collected for the first time to give the reader a taste of what Shetland storytelling can offer.

The different stories are illustrated with lovely black-and white illustrations.

The book is partly financed by the European Union and the Destination Viking Saga land project, and can be ordered from Shetland Amenity Trust, Lerwick. Price £5.00.
**I was there...**

**The Launch of the Viking Longship – Havhingsten fra Glendalough – at Roskilde in Denmark on Sept 4, 2004**

*Havhingsten fra Glendalough: The Thoroughbred of the Sea from Glendalough*

**Text and photos by Martin Murphy**

Since the excavations of the Viking-age ships in the fjord near Roskilde, slowly but surely information has accumulated as the remnants of the ships have been measured, recovered, preserved and reassembled. Once the Viking Ship Museum became a reality a more overall picture was established as to how and where the ships were made, and of what materials (see VHM 3/2004, Eds.note).

Shipbuilding techniques have developed through time as they did during the Viking period. At the time the longship was built it would have been the height of Viking ship-building achievement, whether it was for better or worse – only a loud voice from the past would tell us – or lots of trial and error in present day. The change from cleats and lashings to trenails can only be assessed by experience upon the cresting waves of the ocean, by men who understand the construction and requirements in all conditions and circumstances.

It has been my privilege to observe the construction of the longship over a three-year period, alas, only momentarily on three separate occasions. Enough for me to understand the considerable effort involved and to be filled with awe and admiration for the whole project as well as envious of those involved.

Seeing the completed vessel adorned in its colours resting comfortably in its chocks awaiting the first journey was an exciting moment. The word “Long Serpent” come to mind from some long-forgotten text, truly if it had a head and tail it would resemble some great beast of another age.

One can only try and visualise the fleets of such ships numbered in the hundreds, carrying thousands of men, weapons and supplies, and in many cases horses and cattle, to raid, invade and colonise lands far away.

Converting those hulls and rigging to raw materials would involve a measurable calculation of the tree-cover loss on the earth’s surface. There must have been a constant quest for timber in every direction and of course Ireland was one of these locations. Did such expeditions alter the face of that country and its people? – It had to have!

I observed the fitting of the steering oar to the ship by a boatyard crew, a massive paddle-shaped piece of oak held in place by a large “crown-knotted” length of rope. This passes through a central hole into the hull and a leather strap keeps the top tight to the gunnel, allowing it to pivot both vertically and horizontally and be lifted clear of the seabed in shallow water. Its length is approximately 3 meters.

In Bergen, Norway a steering oar was found, 6.7 meters long and of equal dimensions, over twice the size of this one. Was the ship it steered twice the size of this one? The mind finds it hard to comprehend.

Once fitted, the steering mechanism gave the ship another dimension as would the mast, sail, yard and rigging in their turn to complete the structure.

Two more additions were made at this stage: a golden wind vane on the bow, and a green pennant on the stern. These sat on the slender extremities silhouetted against the sky.

On the day of the “Launch” many thousands of people gathered in the warm sunshine. A splendid open canopy was provided for the many dignitaries and monarch coming to celebrate the occasion. A covered rostrum in an elevated position was provided for the musicians and the singer.

The lady compere did an excellent job of introducing the event and celebrities, who were to speak of their enthusiasm for the project and achievement to the gathered thousands.

A new composition called “Fanfare for a Longship” by Savin Davey was performed by Palle Mikkborg (trumpet and keyboard) Helen Davies (Harp), Ilam O’Flynn (Killean Pipes) Lena Willemark (Vocal) and Svend Kjeldsen (Bodhrain). The music and human voice created an atmosphere of space and time, lifting the spirit into another age and dimension.

A military brass band played and...
paraded around the site, speakers spoke of the rewards and effort of such endeavours and at the Queen’s request the great ship received its name, then slid towards the waiting sea (power generated by the boatyard staff with the aid of ropes and tackle.) The swelling hull gave a spinal quiver as if in resistance, before it plunged stem first into the still water.

From their boat in the foreground a hundred fiddlers dressed in white played a fanfare, people cheered and applauded as the magnificent vessel found buoyancy and a new life from forest canopy to ocean wanderer. No ship of any period in time could have been given more adulation and salutation upon its introduction to the world of water.

While at Roskilde I camped by the fjord shore, at dawn each day observing the local swans flying around and landing on the fjord with effortless majesty, then moving with such ease and grace over the undulating surface. Man must have observed these exquisite birds, envied on the fjord with effortless majesty, then the local swans flying around and landing the magnificent vessel found buoyancy and a new life from forest canopy to ocean wanderer. No ship of any period in time could have been given more adulation and salutation upon its introduction to the world of water.

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Hafsfjord-spillene 2005
A festival in the region of Stavanger in Norway

June 2–5, 2005
The battle at Hafrsfjord ca 872 AD is a central event for Norwegian identity. It is a milestone in the coalition making Norway a kingdom. Here some of the most important roots for modern Norway are found.

The Vikings were international explorers and traders who had developed culture and technology with people from many parts of the world. In this spirit through tourism, the organisers hope to give the visitors, both from abroad and from other places in Norway, a unique occasion to be able to experience the Stavanger region in a new and hitherto unknown way.

With operas like Rygekongen, a Viking-age village with market, historical food, Viking-ship activities and historical seminars, this will be a festival for a large audience, with special attention to children and young people.

Further information
http://www.hafsfordspillene.no

Leaving the harbour for the first time, with the Queen onboard, and with the oars poised.

that the Vikings and – Roskilde had accomplished it with panache.

Before a vessel of this type can be projected in any direction it has to be balanced with weights, in this case large rounded rocks that sit between the frames around the keel. Green sticks set in line with the frames approximately 3 inches apart protect the precious boards of the hull.

This task completed, the staff from the boat yard manned the oars, male and female alike, a figure at the steering oar clad in the bright-coloured garb of a Viking chief, his cloak pin and blond hair gleaming in the sunlight.

Those at the oars donned the blue shirt with essential commands from their Captain, the crew assembled the many oars and at a word from the stern the crew had tested and error with rigging and balancing aloft but that was not to be. Much trial and error would be needed before it could be seen and assessed the situation and exchanged observations.

On the Sunday there were still many admiring people in attendance, some hoping to see the ship with mast and sail aloft but that was not to be. Much trial and error with rigging and balancing would be needed before it could be seen in its full splendour but another excellent rowing performance was imminent.

The crew showed their prowess by turning the vessel in the harbour and into the main fjord. The crowd applauded, people cheered and whistled, the armada of dozens of small and large modern boats blasted their horns in adoration, and within seconds the boat was enveloped by this colourful entourage and disappeared from view. In the distance the brown sails of the other Viking ship replicas could be seen, as if waiting for their chieftain to lead them far afield.

This journey was to be quite short but positive and soon it returned to the harbour and its dock, proud glowing faces arrayed along its gunnel.

That was to be the activity of the day but the morrow would probably be more exciting once the crew had tested and assessed the situation and exchanged observations.

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to leap forward with the sense of exploration and adventure in its movements, a more confident crew thrusting it onwards.

Having acquired a position on the Gokstad Viking replica, the “Gaia” from Sandefjord, Norway, my final observations were conducted from the deck of this sister ship. As we headed out of the fjord towards the site of the Skuldelev wrecks we had an excellent view of the Skuldelev 2. As I looked at the faces of the numerous rowers I wondered what was in their minds after such long hard, painstaking work – were they proud and satisfied, or were they all longing to be looking up at a great billowing sail, heaving in the roar of a good sea running…as any true Viking would.

Before long the ship was a speck and Roskilde a haze in the distance and our concentration was on where and how we were going, but the magic of those three days would remain within me for a long, long time.

It was with some regret that I left Roskilde so quickly because I would have liked to have spent more time around the Viking market where so many things were happening and so many Viking goods were for sale e.g. whale’s teeth, amber, fabrics, pottery, bone objects, horns and articles made from horn, fresh roasted meat, wood crafts, silver, gold, all the things that would have been valuable in Viking times and still are today. The authenticity of the camp’s occupants both in dress and accommodation was excellent and to see those figures around the fires in the evening was to be transported into another age.

In the boatyard complex it would have been good to talk more to people like Flemming Alruin, the bowmaker of note and Anna Norgaard, the weaver of Viking ship sails and many other crafts. Plus the knifemaker, blacksmith, cooper, ropemaker, and paintmaker, all people whose skills would have made life more viable in Viking times. They make us realise how lacking the world is today of physical skills where a human being can become lost in the emotional fulfilment of Hand and Heart work. – Alas!!

Fixing the steering oar.

About the author
Martin Murphy comes from Derbyshire England where he worked as a plumbing and heating engineer for 25 years, specialising in sheet lead work. He has travelled extensively, including Viking settlements in Iceland, the Faroes, Greenland, Newfoundland and Scandinavia. He is a master of a number of crafts such as jewellery, ironwork, furniture making, stone carving and leatherwork, as well as making replicas of ancient weapons and armour for museums in Sheffield. Presently craftsman in residence at Kilmartin Museum, Argyll, Scotland.

Maps, Myths, and Men.
The Story of the Vinland Map

One of the fascinating and much debated stories is the so-called Vinland map – a map supposedly from around AD 1440. It first appeared on the antiquarian market in 1957 and was kept a secret for some years, while being studied by scholars from Yale University.

In 1965, they published an extensive work (The Vinland Map and the Tartar Relation by Skelton, Marston and Painter, New Haven, Conn.; Yale University Press, 1965). Its authenticity (like the question of the Kensington stone, see earlier number of Viking Heritage Magazine) has been hotly debated ever since – in controversies ranging from such issues as the anomalous composition of the ink and the map’s lack of provenance to a plethora of historical and cartographical riddles.

Maps, Myths, and Men is the first work to address the full range of this debate. The author explains a number of the riddles and provides evidence for the identity of the mapmaker and the source of the parchment used. She also applies current knowledge of medieval Norse culture and exploration to counter widespread misinformation about Norse voyages to North America and about the Norse world picture. It is a fascinating and very readable investigation of one of the most debated issues of Viking history. She delves into the question of authenticity and gives ample evidence that the map is a fraud. She even identifies the mapmaker. But I won’t say any more, you have to read it for yourself.

Maps, Myths, and Men. Written by Kirsten A. Seaver

New book!
Vikingarnas stridskonst

Written by Lars Magnar Enoksen
Published by Historiska Media, Lund
ISBN 9185057320

Most books reviewed in Viking Heritage Magazine are written in English but Lars Magnar Enoksen’s “Vikingarnas stridskonst” (The fighting art of the Vikings) is written entirely in Swedish and one dares say that it’s mainly written for Scandinavian readers. As far as I know there are no plans for an English edition to date.

Enoksen has written several other titles on the Viking-age theme earlier, mainly dealing with runes and the Norse Saga-material. In Vikingarnas Stridskonst he investigates what the Sagas and other earlier, contemporary and later written sources can tell about warfare and warriors in the late Iron Age. In 368 pages he examines the competitive aspects of the Viking-age society, from its sports and games to its weapons and tactics in battle.

To some extent he uses archaeological finds and various monuments as well as contemporary art in his survey, but his views and methods are mainly those of a historian, i.e. the finds etc. are used to underline the written sources that are accounted for in the book. He begins by listing his sources in an extensive and thorough manner followed by a review of how warfare and other more or less peaceful games and sports are told, shown or otherwise treated in these written accounts.

In a lengthy section he sums up the history of the Scandinavian version of wrestling – Glima and all through the book Enoksen keeps coming back to a theory that the rules and social codes of Glima, are applicable for the Viking-age art of war in general. It comes as no surprise that Enoksen himself is deeply involved in Glima – he is a skilled wrestler and one of the main promoters of the sport in Sweden.

After the Glima survey he quite literally increases the ratio of violence by describing Norse weapon practise as well as ritualised combats such as holmsgang and envig and finally full-scale combat. He also presents the various weapons and pieces of armour used by the Viking-age Norse and how warriors were depicted by contemporary artists. He concludes his survey by analysing the written accounts for two of the most enthralling legendary battles during the late Iron Age; Brakulla and Svolder.

In Vikingarnas stridskonst Enoksen has managed to create a good overview of the history of Glima along with how warriors and warfare are presented in the Icelandic sagas and elsewhere, most notably in Saxo Grammaticus’ “Gesta Danorum” or“The history of the Danes” from the 12th century, a literary work often overshadowed by Snorri Sturluson’s “Heimskringla”.

Most of the pictures in the book are drawn by Enoksen himself, predominately in a woodcut style. His use of the simplistic style is intended to endorse the instructive elements of the picture. I leave it to the individual reader to judge if this is the case.

Sadly there are some drawbacks and errors in the book. In their presentation of the book, the publisher, Swedish Historiska Media maintains that Enoksen’s book is the first thorough survey of Norse warfare. Enoksen also begins the book by stating that nothing useful about Viking-age warfare has been written since 1909. Both are wrong of course. Readers of my earlier reviews of Mr J. Kim Siddorn’s “Viking Weapons & Warfare” (VHM 4/2001 & 1/2004) know that there are other high standard books on the same theme. To me the early date coincides a bit too well with Lauritz and Curt Weibull’s crusade against the Saga material and Saxo Grammaticus. Their critical approach based on a great amount of source-criticism was presented in 1911 and is still used in both history and archaeology, dismissing most of the saga material as non-valid sources for academic studies.

The weakest part of the book is the presentation of the various types of weapons used by the Norse during the Viking Age. Here Enoksen repeatedly fails to recognize the general archaeological terminology and some outright errors have found their way into his text. For instance he states twice that no Viking-age bows have ever been found, while a short search in archaeological literature or on the Internet would have told him that several bows – from Haithabu in present-day Germany –have indeed been found.

As for the lack of proper terminology it isn’t as erroneous as it is confusing, and I must admit annoying for a narrow specialist and wise-acre like myself, for example when he refers to spears heads as being tied to the shaft with rope. To me this signals hasty work and lack of proper proofreading, something Enoksen shares with Siddorn. One can’t help but wonder why it is so hard for editors and authors to take the time it takes to read through a script thoroughly to minimize the rate of misprints and apparent inconsistencies prior to publishing.

Harsh reviewing and drawbacks aside Vikingarnas stridskonst is still a good book for those interested in Norse warfare, especially as it’s written in Swedish. I would like to suggest readers to compare it with another Swedish book though – “Vikingarnas lekar: Vikingen som idrottare” literally “The games of the Vikings” by Bertil Wahlqvist (Atlantis 1993). This book also surveys the Norse written accounts for information, but as the title implies Wahlqvist – a sports historian concentrates his study on games and sports during the Scandinavian late Iron Age – but he uses many of the same sources that Enoksen does. The reader may find such a “parallel reading” rewarding and interesting.

By NY-BJÖRN GUSTAFSSON, ARCHAEOLOGIST AND RE-ENACTOR
New books!

**Vikings Around the home and hearth**

Written by Anette Tamm
Publisher: Anette Tamm
Promotion & Design
www.anettetamm.se
ISBN 91-975071-0-5

This book is presented as an activity book intended for families with children. With a mixture of facts, stories, recipes, handicrafts and many more activities, its purpose is to inspire all family members to share an interest in history and especially the Viking-age.

With the help of the Viking-age family named Gunnebo, you and your children will travel back in time and receive an introduction to old stories, runes, animals on the farm, games and sports. You can also learn how to dye cloth and make clothes, get inspiration for making pottery and some Viking-age food from the recipes included. And all of this is fully illustrated with appealing drawings and colour photographs.

The book is a fine example of how to bring history closer in a comprehensible way and within easy reach for both children and adults. The author has succeeded with the difficult task of linking knowledge with an experience for all the senses. I am sure that this book will be a first choice for many children who enjoy stories and doing arts and crafts, and even small children will be able to use it.

This is the first part of a series of forthcoming historical activity books for the whole family by the same author. The next part will deal with Vikings out in the world.

The book is currently available in Swedish and this spring it will also be translated and published in English. MEE

**Representing the Gods – the Figurines from Lunda**

Written by Gunnar Andersson, Lena Beronius Jörpeland, Jan Dunér, Sara Fritsch & Eva Skyllberg
Published by Riksantikvarieämbetets förlag, Stockholm www.raa.se
ISBN 91-7209-357-9
ISSN 1102-187x

On the front cover of VHM 2/2004 three unique figurines were displayed. These figurines were found in archaeological excavations of an Iron-age farmstead in Lunda parish, Sweden, in 2002. It is an unusual find, not only due to the uniqueness of the objects but also because the figurines were discovered in their original context, which is rather exceptional. Now a book about them, written by the archaeologists from the Lunda project, has been published.

This book gives a thorough presentation of the three figurines. The authors discuss how they were made originally as well as different ways of interpreting them. Their practical usage in the cult is also discussed as well as their social contemporary function. Although they are dated to pre-Viking times, around 450-600 AD, they embody a continuous prevailing Iron-age cult.

A clear, collated overview of similar, previously known finds has been included in the book. This will be a great help for scholars as this is the first and only study of similar Scandinavian finds.

By comparing them with the few other similar figurine finds of Scandinavia, some close and some distant “relatives”, together with the scarce information from written sources, we get an insight into the cosmos of the Nordic people at the time before the breakthrough of Christianity.

The book contains many illustrative photos in full colour. It is only available in Swedish but all captions are translated into English and an extensive summary in English is included. MEE
NEW IMAX MOVIE ABOUT VIKINGS!

Vikings: Journey to New Worlds
It is rather strange that neither Hollywood nor movie makers in Europe ever succeeded in making a Viking drama, like the Gladiators for the Romans or Braveheart for the old Scots, even if Hollywood made the rather fascinating film in the 1950s, where Kirk Douglas and other famous actors became Vikings from the north.

Now there is a new IMAX film making its way around the world. It is a fascinating film, 40 minutes long, played on the giant screen. The director is Marc Fafard, and the movie was released in the end of January 2005. It is distributed through Giant Screen Films.

“They came from the North and soon legend would say that they didn’t know fear. For hundreds of years, they were another name for ‘terror’. They could sail icy oceans and narrow rivers, and strike far inland, without warning or mercy. They became the Russians, and the Normans. They were the valued mercenaries of Byzantine Emperors and a perpetual challenge to the authority of European monarchs. Warriors, slavers, traders, explorers but also farmers, settlers, poets, loyal family members and skilled craftsmen. Bold, proud, ambitious and free. And today, across the boundaries of time they defy North American history by telling us the saga of Leif Eriksson, the Lucky, coming to Vinland, the actual Newfoundland, 500 years before Columbus crossed the Atlantic.” (Big Movie Zone, http://www.bigmoviezone.com/filmsearch/movies/?uniq=365/DC

Vikings attacking the monastery at Lindisfarne. Credits to Tycho Brahe Planterium
The Opening of Gotland

Viking Island 2005

February 25

Gotland, with its unique Viking heritage, hopes to be able to recreate a cultural center in the Baltic Sea. Up on the clifftop of Grogarn, hundreds of people gathered to participate in the opening ceremony of the Viking Year 2005. Following a speech by the local government commissioner Sonja Landin, the Crown Princess Victoria of Sweden lit the 5-m high bonfire with a torch. The crown princess hopes that the Viking Year 2005 will increase interest in history, not only on Gotland, but in the whole of Sweden.

February 26

The Viking Village in Tofta offers visitors fantastic glimpses into the everyday life and feasts of the Gotlanders and Vikings. Here, the opening of the Viking Year 2005 was celebrated for two days. The visitors were invited to take part in a midwinter blot (sacrifice), a Viking market and a banquet with grilled lamb on a spit in the longhouse of the village. Sacrifices were also made to the bridal couple.

February 26

When the sun had set and around 40 bonfires had been lit around the Gotlandic coast, a Viking wedding took place in Lojsta parish. Martin “E-Type” Eriksson, a famous Swedish pop-star and Viking re-enactor, initiated the play by welcoming the wedding guests, i.e. the audience, and establishing the fact that the actual year was 1019 AD. As the seeress had prophesied, Ingegerd, the daughter of Olof Skötkonung, and the powerful Jaroslav from Rus will be married, which was advantageous for both East and West. A magnificent outdoor play was performed, that closed with the following words by Jaroslav: “Now folks, this marks the start of a celebration that will last throughout the whole year!” Martin “E-Type” Eriksson, who was dressed in Viking-age puff trousers, a woolen frock and boots made of elk hide, wished all visitors welcome and opened the market.

Photo Marita E Ekman
A magnificent find of runes on a lead plate in Skänninge, Sweden

Archaeologists have made a remarkable find of around sixty rune inscriptions on a sheet of lead-plate. Earlier only around a total of 20 sheets of lead-plate are known from Sweden.

The plate is 2 x 3 cm and only 1–2 mm thick. There are around sixty millimetre-high runes inscribed on both the front and back, most likely with a sharp small knife.

The plate was found in the excavations of a grave in a monastery church. It was slightly damaged, so the whole inscription could not be seen. What makes it so interesting is the fact that the inscription is not in Latin, but in the language of the people. According to Helmer Gustavson, the rune expert, the inscription is probably a prayer for the dead, most likely Ave Maria.

In search for Vikings in Iran

This winter Danish archaeologists have travelled to the coasts of the Caspian Sea in northern Iran to find out more about the relationships between Iranians and Vikings.

When examining Viking-age silver coins found in Denmark, Nadia Haupt, a researcher at Copenhagen Museum, discovered more than one thousand coins and relics that did not belong to the Danish or other Scandinavian cultures. She became interested in where these items originated and what kind of influence the Eastern cultures had on Scandinavia in the Viking period.

The fieldwork done in Iran will now be followed by studies in Denmark.

Source: www.payvand.com
The big event when the Swedish crown princess Victoria came to Gotland for the opening ceremony of Gotland Viking Island 2005, has inspired the artist Ingvar Westöö to make a new picture stone, this time a paper work of art. The princess came from the sky to light the first of all the bonfires around the coast of the island. Art by Ingvar Westöö. Copyright: The Documentation Group Rex Mundi.
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