

## VIKINGS!

“The clank of steel, the bowstrings’ twang,  
The sounds of battle loudly rang;” (heimskringla)

The Norse culture entered Western Europe with a deafening crash and changed the political and cultural make up of vast swathes of Europe irrevocably. Through trade and violence Norse culture had a serious impact on Scotland and Ireland. In Scotland the Vikings occupied great areas of the Isles and West, founding many families and making many far reaching cultural and material changes to the culture. The Northern Isles remained Norwegian until well into the medieval period and are still genetically very strongly Norwegian. The Nordic influence can be seen in buildings, words material culture and extensive Nordic place names. Of 126 villages on Lewis 99 are purely Scandinavian. The clans MacLeod, Macaulay Macqueen Matheson and many others were founded by Norse settlers. About 30% of the genetic signature from Western Scotland hails from Norway showing widespread population influx. The clan chiefs of MacDonald are genetically strongly Norse and the Lordship of the Isles was formed by the chaos surrounding Norse invasions The medieval character of the Isles and Western Highlands with a series of territories united by a maritime power using Birlinns (a boat strongly reminiscent of longships) and mail clad axe wielding heavy infantry, the famous galloglass, being Norse in origin.

The Norwegians maintained that the Isles of Scotland were theirs until the 13th century a matter settled at the battle of Largs 1263 which effectively ended the “Viking period” in Scotland. Three years after Largs in the treaty of Perth, Mann and the Isles were handed over to the Scottish Crown for 4000 marks and 100 marks a year “for ever”. Though the Northern isles of Orkney and Shetland did not become part of Scotland until the 15th Century.

The effect of the Vikings on the culture of the Gaels was profound and long lasting. Much of what later came to typify Gaelic culture can be traced back to this period of history, including I would say the martial archery for which the Highlanders later became known. The Gaelic word for bow “boghan” is itself derived from the Norse. This perhaps gives a clue that martial archery was a reaction to a Viking tradition rather than an indigenous practice. Unlike other early medieval cultures archery played a key role in Norse combat. And while Nordic weaponry and material culture was consistent with other Europeans widespread use of the bow does seem to differentiate them from the mainstream.

The Viking world was very large and their culture reached across three continents giving us a wide breadth of sources to draw from.

Archery finds are common from the Norse period bows and arrows were frequently interred within the tombs of warriors and the literature of the sagas confirms that bows were used extensively for combat. The thirty year old warrior from Scar in Orkney was buried with an axe, sword, shield and bow along with many other more peaceful items.

Bows themselves being wood rarely survive in the archaeological record and indeed the Bow at Scar is presumed on the basis of a quiver of arrows being the only surviving evidence. Dr William Short states that the great archaeological frequency of arrowheads in a domestic context rather than warrior burials suggests that Bows were not necessarily considered part of the warrior’s panalogy.

Two bows are known for this period in a Viking context. The Ballinderry Crannog bow from Ireland and the Hedeby bow from Denmark. Both bows were ovoid sectioned and made of yew wood. Both were over 6’ c.190cm and c.192cm long. The Ballinderry bow looks to have slightly recurved tips. That is the tips are steam or heat bent against the natural bend of the bow which gives great arrow

speed. However the Hedby bow had flared tips which could also be the case with Ballinderry. Jurgan Junkmanns states “. The tips of it (the Ballinderry bow) and most other Viking longbows are not reflexed, but deflexed, which has no function in shooting because it is beyond the string notch.

Maybe the stave as such is a bit reflexed now which is caused by shrinking of the sapwood after unearthing. Most of the older finds of yew bows which were not chemically treated for preservation show this phenomenon.....

Well, nobody knows (why) actually... We can't ask them. I think it's for the looks and part of showing you are a Viking. (..)when viewed from the side it resembles the front of a ship” (pers com)

Reconstructions of the Hedeby bow have given a draw weight around 100 pounds which would be much higher than required for hunting. Modern Bow hunters and hunter gatherers who use bows tend to favour weapons which pull about 50-60 pounds. Not all modern bowyers agree on the higher draw weight and for unarmoured fighters this high figure would not be required. The vast majority of fighters in the early medieval period were unarmoured. A later law required every fighter to be armed with a helmet, spear and shield, while only one shirt of mail was required per ship or 40-60 men. A bow was required for every 6 benches. The armour requirements are lower than those for Anglo Saxon Fyrd men who were drawn at a rate of one man per 5 hides, a hide being a measure of land fit to provide for a family. Fyrd men were required to provide themselves with a mail shirt. The Scandinavian figure may be low but then Anglo Saxon England was a rich country.

Other woods were used, Elm is mentioned in the Orkneyinga saga and in the Lay of Rig “And the big farmer twisted a bowstring, bent an elm bow, made arrows; whilst the mistress looked at her arms, smoothed her clothes, tightened her sleeves.”. Ash is also mentioned and indeed even in Medieval England “white woods” were used to make warbows where the favoured yew was in short supply.

13th Century Icelandic law gives a bowshot as a measurement of distance as 480metres (two hundred fadmar). This distance if correct would suggest that draw weights were very high, as high in fact as later medieval warbows. In 2008 Alistair Aston shot a flight arrow 370 yards from a yew bow with a 132 pound draw weight. Military ranges with heavier arrows must have been shorter and the same archer with the same bow shooting a quarter pound arrow (113 grams) got a respectable 240 yards. These distances won him a flight competition against similarly made bows and arrows. It is unreasonable to expect Viking bows to have achieved much beyond what is possible by modern archers using similar bows today. We should regard the Fadmar as a dubious measurement however halving the distance to 240 meters makes the Fadmar a far more realistic range. Worth noting is the fact that this measurement is the distance from an outlaw's home at which their property is forfeit.

There is some slight evidence for the use of Eastern type recurved bows in Viking cultures. Several Asiatic composite bows are known from a 10th century context in Birka and in the later King's Mirror a Scandinavian treatise on kingship bows called “hornboggi” or horn bow are referred to as useful for mounted troops; “there are, however, other weapons which a mounted warrior may use, if he wishes; among these are the “horn bow” and the weaker (!) crossbow, which a man can easily draw even when on horseback” (King's Mirror).

Indeed in the Epic poem Beowulf a horn bow (hornbage Old English) is used by Hrethel to kill Herebeald.

The bows at Birka shot a variety of Asian and Scandinavian arrow types though as with the examples from the Roman walls in Scotland one wonders how the Asiatic bows with their susceptibility to damp coped in Sweden, it does appear they were used at the fort.

It might be of importance that both in Scotland and Sweden composite bows have been found in static defences, where they could more reliably be kept dry. Asiatic bows would not appear to offer much advantage over native Scandinavian bows though being faster and with a flatter trajectory were probably more accurate. There is extensive Eastern influence at Birka and it is clear that the bows were found in a context of many other Eastern objects and clothing, including lamellar armour. The Asian bow offers no real advantage over the Scandinavian bow in terms of potential penetration or range. The complex and highly skilled process used to make a composite bow was to create a smaller weapon of similar power for use on horseback. For Scandinavians who fought in damper environments on land and at sea the Asian bow represented a great cost for no gain.

Hunbogi or hunnish bow was used as a personal name in Iceland but aside from this there is no reference to this bow in the saga literature. While of great interest and giving a sign of how wide the world of the Viking was the composite bows at Birka were probably unique and don't represent a widespread technology, moreover there is

no evidence that the design had any influence over the development European archery. It would not be unreasonable at all to expect Eastern Rus Vikings to use Asiatic bows. Birka was something of a gateway to the East. Generally over the Western Viking range (West of Norway) arrow heads in the earlier period are

mostly tanged (a thin tongue of metal is stuck into the shaft) with a development to socketed ( with a socket that fits over the shaft) types later in the period. By far the most common arrow head of Scandinavia is a triangle broadhead design with a tang. This would be affixed into the shaft with some type of glue and possibly bound. A hardwood shaft would be more robust but lighter woods like pine could also be used with far more damage likely to the shaft. The tanged design is weaker than the socketed type though this damage might have been desired as damaged arrows would not be “returned” and indeed might cause more problems for those struck. Barbed arrows are also known. To achieve heavy weights heavy woods would be desirable for shafts. Ash was common in later periods, poplar declaimed but shot. Birch is another possibility.

The broad arrow head of the earlier Viking period would be suitable both for the hunt and for war. Halpin notes that in Ireland the bodkin like type 7 arrowhead superseded the broad headed type. The bodkin is unsuitable for hunting as its shape is more for armour piercing and gives it a better flight characteristic for long range shooting. This leads Halpin to suggest that the broad headed type was also used for war in Irish contexts. Certainly the broadhead would be very effective against unarmoured men; modern tests show that mail armour was effective against this type of arrow. The Irish mention that the Vikings were better armoured and that their (the Irish) weapons were ineffective against this armour. From the mid-10th century armour piercing arrows become more common in Irish assemblages. Most of the archery paraphernalia is believed to be Norse so it may reflect a greater armouring of the Irish fighting man at this time as is thought to have been the case in other locations like Anglo Saxon England.

It should be noted that the Royal Armouries do not believe that (later medieval) bodkin points were designed to penetrate armour and indeed in other tests on the effectiveness of mail armours stated “it is almost impossible to penetrate using any conventional medieval weapon” (Medieval Military Surgery”, Medieval History Magazine, Vol 1 is 4, December 2003). Later bodkins were not hardened unlike the type 16 which was an interesting mix of bodkin and broadhead. Bodkin points are less affected by the “wind-planing” that often affects modern bowhunters. Wind planing is the effect of the wind and air on the flat surface of the arrowhead, very often this is compensated for by using large feathers and offsetting those feathers with a helical, or spiral fletching pattern. This produces slower less powerful arrows but with the advantage of greater accuracy. Bodkins are more aerodynamic and potentially more accurate so the greater prevalence of their use might reflect a development of tactics rather than a reaction to Irish (or otherwise) “up-armouring”.

Along with the archaeological evidence we are also fortunate that there is a great deal of textual evidence for the Viking age, both in the extraordinarily rich literary heritage of Iceland but also in the histories of Europe.

Much like the Irish cycles we should remember that the Icelandic sagas were written a few hundred years later than the events they describe and were written in a religious context that was, if not hostile, then unsympathetic or possibly just ignorant of the breadth of the spirituality it replaced. There is also the possibility that the writers of the sagas were making anachronistic errors with the stories, superimposing the technology of the time they were written in to the time when the saga was set. The sagas themselves were written to legitimize and explain the development of the state of Iceland. Iceland was settled mostly by Norwegians and in the manner of many immigrants they wanted to present their ancestors in the best possible light, it being easy to cast aspersions on those who “had to leave”. They were also written as genealogies and many modern translations omit great lists of names for the comfort of the modern reader.

The quote at the beginning of this piece is from the *heimskringla* which also gives us this:

“And Bowman hurried on advancing,  
Their bright helms in the sunshine glancing

.....

Then the bonde—army pushed on from all quarters. They who stood in front hewed down with their swords; they who stood next thrust

with their spears; and they who stood hindmost shot arrows, cast spears, or threw stones, hand—axes, or sharp stakes. Soon there was a great fall of men in the battle.” (heimskringla)

This excerpt gives us the idea that archers here ”bonde” or bondi the middle ranking Norseman were in the rear ranks shooting over the shieldwall. In the battle of Bruanunburh an Anglo Saxon poem about an un-located Scots-Saxon -Norse battle gives us the line

Thaer laeg secg manig  
garum agieted, guma Northerna  
ofer scield scoten, swelce Scyttisc eac,  
werig, wiges saed.

There lay many a warrior  
by spears destroyed; Northern men  
shot over shield, likewise Scottish as well,  
weary, war sated.

Again suggesting use of bows in battle and how they could be used to inflict damage against warriors carrying large effective shields. From another Anglo Saxon poem we get:

Nor might any one of them injure the other  
Except where from arrow’s flight one had his death.

This is from the epic Battle of Maldon, and relates how the armies were separated at high tide. Though they were used later when Britnoth allowed the Vikings to cross so they could fight more effectively:

The sharp-ground spears to fly.  
Bows were busied - shield met point

The monk Abbo’s account of the siege of Paris in the 9th Century includes accounts of archers “sharpening their arrow heads” and using “poisoned arrows”. “Stormed it with arrows...on every side arrows sped and blood flowed...with the arrows mingled the stones cast by slings and war machines”. He also relates that Abbot Ebo-olus was killed by an arrow. In Ireland the Cogad Gaidel re Galaib describes the Vikings as having “sharp, swift barbed murderous poisoned arrows” and “polished yellow shining bows”. It is possible that the “poison in both cases, if it is not a literary device to describe nasty, rotten heathens, could be from the standard practice of sticking arrows into the earth.

“Gunnar strings his bow, and takes his arrows and throws them on the ground before him, and shoots as soon as ever they come within shot; by that Gunnar wounded many men, but some he slew.” (Njal’s saga)

In another case of possible propaganda Viking heathens martyred Edmund King of East Anglia by using him as target practice after he had infuriated them by refusing to renounce Christ.

From a history written from a Norse perspective we can look at the heimskringla which has been quoted above. This is a history of the Norse kings by Snorri Sturlson. The history is full of “arrow storms” and the woundings of men like Thormod by arrows “There he was struck by an arrow in the left side; but he broke off the shaft of the arrow.... The arrow—drift oertook me, girl, -A fine—ground arrow in the whirl Went through me, and I feel the dart Sits, lovely girl, too near my heart.... In a stone pot she had stirred together leeks and other herbs, and boiled them, and gave the wounded men of it to eat, by which she discovered if the wounds had penetrated into the belly; for if the wound had gone so deep, it would smell of leek.... The king has fed us well. I am fat, even at the heart—roots;” and so saying he leant back, and was dead.

Olaf Trygvasson’s saga gives more details of archery at sea.

The Gotlanders must tremble next;  
And Scania’s shores are sorely vexed  
By the sharp pelting arrow shower  
The hero and his warriors pour;

His last battle at Svolder against a combined Swedish Wendish and Danish fleet is described in the saga as a virtual archery festival.

“The king had a bow in his hands, and laid an arrow on the string, and aimed at Ulf.

Ulf said, “Shoot another way, king, where it is more needful: my work is thy gain..... Einar Tambarskelver, one of the sharpest of bowshooters, stood by the mast, and shot with his bow. Einar shot an arrow at Earl Eirik, which hit the tiller end just above the earl’s head so hard that it entered the wood up to the arrow-shaft. The earl looked that way, and asked if they knew who had shot; and at the same moment another arrow flew between his hand and his side, and into the stuffing of the chief’s stool, so that the barb stood far out on the other side. Then said the earl to a man called Fin, -- but some say he was of Fin (Laplander) race, and was a superior archer, -- “Shoot that tall man by the mast.” Fin shot; and the arrow hit the middle of Einar’s bow just at the moment that Einar was drawing it, and the bow was split in two parts.

“What is that,” cried King Olaf, “that broke with such a noise?”

“Norway, king, from thy hands,” cried Einar.

“No! not quite so much as that,” says the king; “take my bow, and shoot,” flinging the bow to him.

Einar took the bow, and drew it over the head of the arrow. “Too weak, too weak,” said he, “for the bow of a mighty king!” and, throwing the bow aside, he took sword and shield, and fought Valiantly.

.... The king stood on the gangways of the Long Serpent. and shot the greater part of the day; sometimes with the bow”

Or from the Orkneyinga Saga:

As blood beat on helms,  
so did blades on breastplates:  
the bow of Agder’s prince  
was bravely bent.  
On shields the arrow-storm  
spattered; as men fell,  
deftly the lord of Hordar  
dealt the Earl’s death-blow.

These sources are clear that archery was not only practiced by senior retainers but also by kings themselves. Archery is also given a high social status in the Rigsthula or list of Rig. Rig (the god Heimdall) travels through Midgard and creates the three social classes of Thrall, Bondi and Jarl. When Rig meets with the father and mother of the race of Jarls Fathir is making archery equipment:

There sat the house-lord, | wound strings for the bow,  
Shafts he fashioned, | and bows he shaped.

The son Jarl later learns the arts of war:  
Grew Jarl forthwith in the halls and 'gan  
to swing the shield, to fit the string,  
to bend the bow, to shaft the arrow,  
to hurl the dart, to shake the spear,  
to ride the horse, to loose the hounds,  
to draw the sword, and to swim the stream.

Archery paraphernalia was also a part of the grave goods of Kings and higher ranking males in the society. Further down the social scale Gunnar a doomed heroic figure from the famous Njal's Saga made a heroic defence of his house with his bow:

"Then they made for the buildings. Gunnar shot out arrows at them, and made a stout defence, and they could get nothing done. Then some of them got into the out-houses and tried to attack him thence, but Gunnar found them out with his arrows there also, and still they could get nothing done.

So it went on for while, then they took a rest, and made a second onslaught. Gunnar still shot out at them, and they could do nothing, and fell off the second time. Then Gizur the white said-.....

Gunnar said, "There lies on arrow outside on the wall, and it is one of their shafts; I will shoot at them with it, and it will be a shame to them if they get a hurt from their own weapons".....

Just then Thorbrand Thorleik's son sprang up on the roof, and cuts asunder Gunnar's bowstring..... Give me two locks of thy hair, and ye two, my mother and thou, twist them together into a bowstring for me."

"Does aught lie on it?" she says.

"My life lies on it," he said; "for they will never come to close quarters with me if I can keep them off with my bow."

"Well!" she says, "now I will call to thy mind that slap on the face which thou gavest me; and I care never a whit whether thou holdest out a long while or a short."

From Hurstwic

And so Gunnar meets his end. The hair bowstring is an interesting reference to a recurrent theme in classical literature and fairly obviously would not be even close to strong enough for a bow. Throughout Njals saga Gunnar and Hjortr use bows for personal defence in the rough feud that forms the theme of the story. The story above is paralleled on the Franks casket which may be a co-incidence, defending one's home with a bow was certainly a theme expressed more than once in the Germanic dark ages.

Ullr the god of archery, was the son of Thor and Sif, god of skiing too, was invoked for duels. He had a hall in Yew-dale. It is thought that Ullr (which might mean glory) was a very popular god but who did not survive long enough to be immortalised by the pen of Snorri Sturluson. There is a cloak dating to 200ad and a later ritual platform that are associated with the god. Indeed the rings held to be so important to heathen blots were Ullr rings. Ullr is not really considered to have been a hunting God and he has strong associations with war.

Ullr

In conclusion we can say that in general Norse warriors used bows across the social scale. Archery was a pursuit of the warrior and bows could be associated with very senior figures. Archery has a very high status in Viking culture and was associated with figures, both mythological and historical, of glory and prestige. Later law suggests that bows were carried in ratios of at least five to one ship (one in six benches on a ship like skuldelev 2 having 30 benches) of about 70 men. They were used extensively in sea battles and sieges. They were also used in open battles and I suspect were carried in much higher ratios than the law decreed.

#### Chest anchors

In the east Asiatic type bows could be used with special centers with contacts in the East also having supplies of these weapons. In the main Yew, ash or elm bows were used in a pattern similar to what we now call a long-bow. Draw weights could have been as high as later English bows though without extensive cavalry or highly armoured opponents would not necessarily need to be. If, as Dr Short suggests, bows were used primarily for hunting we should expect draw weights to be about 60 pounds.

There is a transition to socketed bodkin types over the period with shafts being presumably made of hardwoods. Early arrowheads were tanged and arrowheads were predominantly broadheads sometimes with barbs. Forked arrowheads are also known.

Tabs, bracers and quivers were options and probably conformed to later examples. Quivers could be made from leather or canvas and would be worn at the hip.

The standard early medieval depiction of archers using a chest anchor is often queried. It is certainly possible to shoot in that manner though seems needlessly difficult to me and does not make the most of the arc of the bow. Ishi the Yana Indian shot with a high chest anchor but it is by no means a good way to shoot. There may be an artistic convention at work.

Vikings used archery in a tactically competent way defeating mounted forces through sophisticated and cunning use of archery (heimskringla) and in a way which accentuated their already impressive martial culture.