



Eastern archery in Birka's Garrison

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Introduction

The epic poem *Beowulf* relates that Hathkin, son of Hrethel king of the Geats, kills his older brother Herebeald with a 'horn bow' (OE *'hornbage'* in Klaeber 1951, l. 2437; translated as 'horny bow' in Gummere 1910), most likely the present-day 'composite bow', and an unusual weapon for the north European Late Iron Age. It was an advanced type of archer's bow with constructional details mainly of horn and sinew. It was a technological import

and not a natural component of north-Germanic warfare. In a European context it was primarily to be found among the Eurasian steppe nomads. The steppes warriors also made use of other innovations related to archery and the distinctive fighting technique that accompanied it. What then is the significance of finding fighting equipment associated with the composite bow in a trading place like Birka on Lake Mälaren?

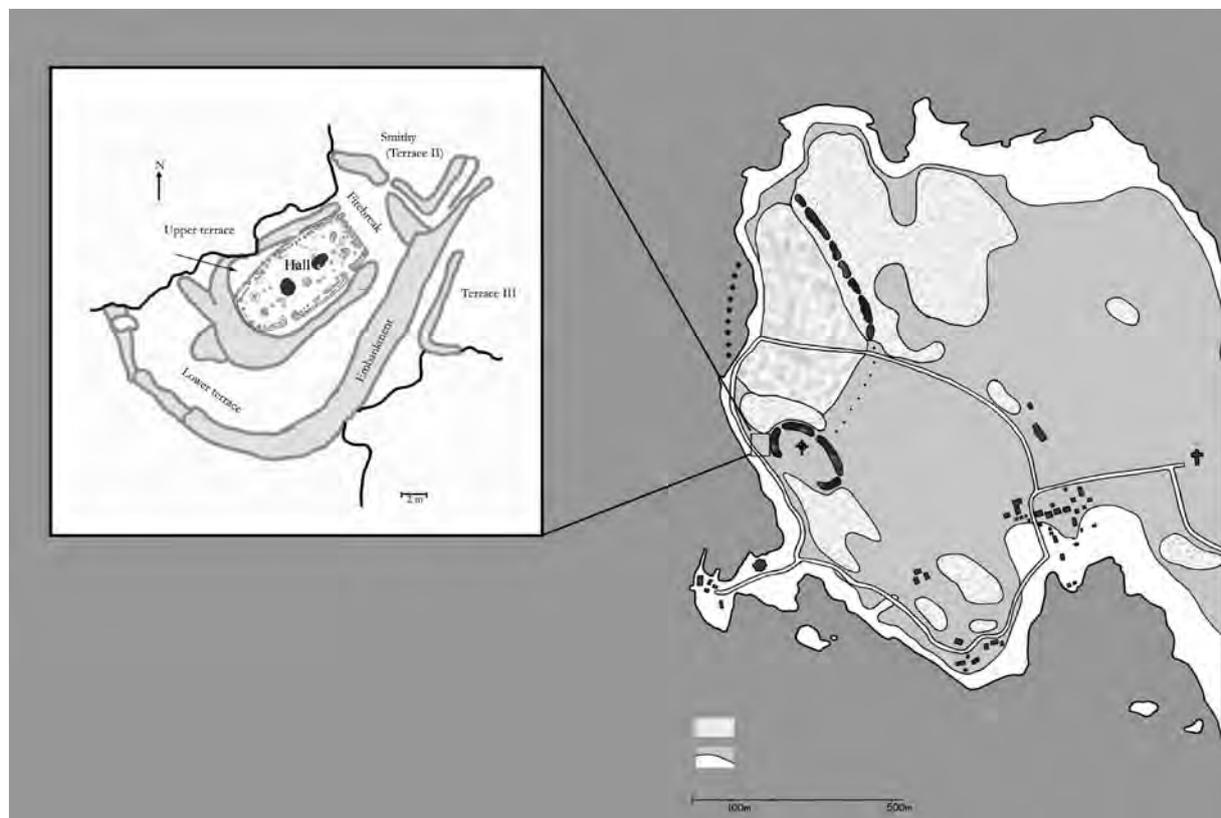


Figure 45. Map over Birka/Björkö and the Garrison (C. Hedenstierna-Jonson; L. Kitzler Åhfeldt & M. Olausson).

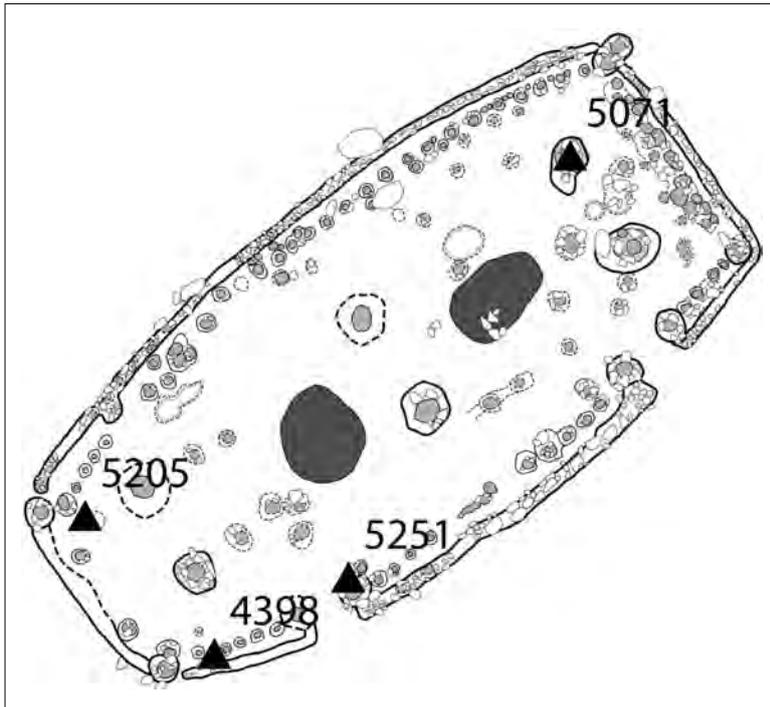


Figure 46. The distribution of quiver mounts over the Garrison area (L. Bergström)

The distinctive indications of eastern contacts that are so typical for 10th century Birka, have been further emphasized by the results of recent archaeological excavations at the Garrison site at Birka (fig. 45). Not least, a series of objects linked to Eurasian archery equip-

ment has been identified so far, including arrows, loops belonging to quivers, and a possible thumb-ring, all in metal (figs. 46 and 47). Several of these objects were found in the Garrison's large hall-building that served as a meeting place of both secular and sacred character. The quiver loops and ring can be directly linked to the warriors of the Garrison since three of the quiver loops and the ring were found against the wall in the western end of the hall-building where weapons once stood, and a fourth lay at the north-eastern roof-bearing post. Two quiver rings were found c. 20 metres south of the hall, and one in an area close to that identified as the smithy. These two southern finds might indicate fighting warriors, perhaps sentries, who took part in the defence of the Garrison during its fall (Lundström 2006: 20f; for coordinates see Holmquist Olausson & Kitzler Åhfeldt 2002). Besides the finds from the Garrison, a contemporary grave (Bj1125b) in Birka's cemetery, Hemlandet, produced a quiver mount and a loop from a bowcase (fig. 48, fig. 49). In addition, a bone object found in the Black Earth has been identified as a mount from a composite bow.

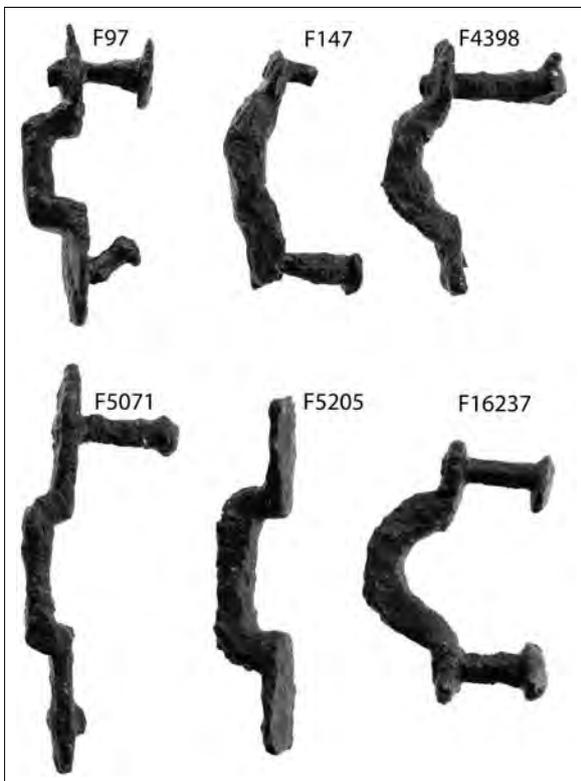


Figure 47. Quiver mounts from the Garrison (photo L. Bergström).

The composite bow

The composite bow was made from a variety of materials, for example, wood, bamboo, leather, horn and sinews, chosen for their various material characteristics, as well as added strengtheners at its 'ears' and grip. In Asia and Eastern Europe, the basic construction comprised a core of wood (or bamboo) but instead of de-

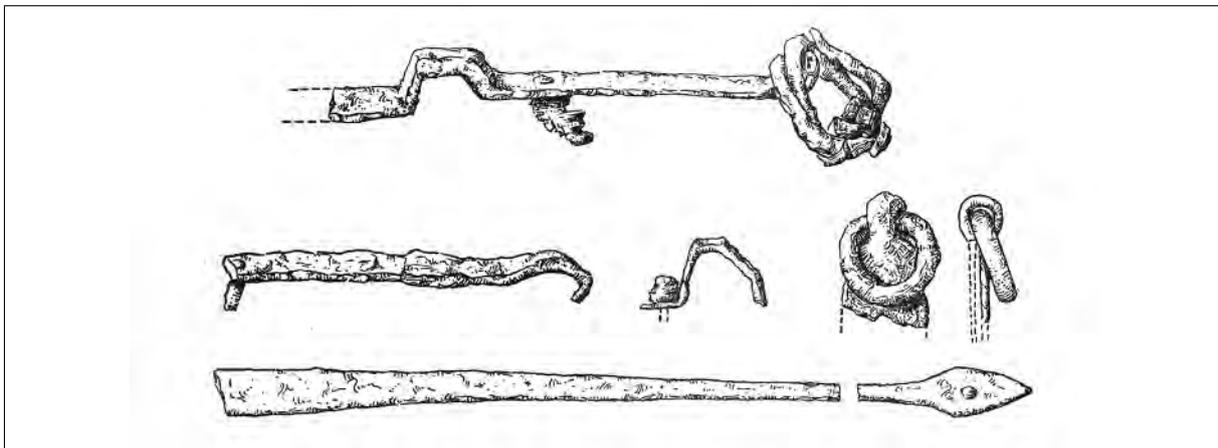


Figure 48. Quiver mounts from burial Bj 1125b (Arbman 1943).

pending on this material alone, as was the case with the native bow in Europe and Scandinavia, the Asian bow makers took advantage of the inherent material properties of horn and sinew in particular. Sinews were glued to the back of the wooden core (the side facing the target), to increase the flexibility of this section since sinews are more supple than wood. The sinews also helped the bow to return more quickly to its original position. In a similar way, the facility of horn to withstand pressure and maintain its original form was utilized by affixing horn to the wooden core's belly (the side against the archer). These constructional details were usually protected by leather or bark. The Asian composite bow was also reflexive: the outer extensions of the bow limbs were curved by heat treatment of the wood and the elasticity of the sinews, in the opposite direction to the taut bow for extra power. The composite bow of the 10th century often had additional bone mounts for a grip and levers, known as 'ears', attached to the limbs. It is usually only these bone mounts that survive best. (Webb 1991:16–19; Harding 1997:99; Grayson 2000; Cederlöf 2002:108; Karasulas 2004:18–21.)

An object of bone from the Black Earth (Birka's town area) has been identified by Kirill Mikhailov as part of an archer's bow of Hunno-Bulgarian type (following Savin-Samenov's classification) (Mikhailov,

pers. comm. 2006). The bone object is c. 15 cm long and c. 1 cm wide, and has convexly trimmed ends which are sharply pointed. A criss-cross pattern and several lines are incised on one face. The object resembles some composite bow mounts that occur, for example, among material of the Avars and Romans. The mount was most probably a handhold-mount that sat on the body or back of a composite bow where the archer placed his palm (cf. Coulston 1985: 228f, 329, 336; Nagy 1998: 101). Such 'Hunno-Bulgarian' bows, to which group the Avarian ones belong, were successively replaced in the Steppes in the 10th century by other models. However, according to John Haldon, the Byzantine army for one continued to use the Hunno-type of composite bow that they had adopted in the 5th/6th centuries (Haldon 1999:132).

Bowcase

A bowcase was usually made of leather and shaped so as to contain half the bow, being c. 60 cm long and 20–30 cm wide. Reconstructions and representations show how the characteristic shape of the bowcase was created for a stringed composite bow (Révész & Nepper 1996: 45; Révész 1996a: 74–76; Révész 1996b: 99–100, 105). A bowcase for a stringed bow was intended to act like a holster, for a warrior on full alert who was ready for battle. It was formed, as was the closed quiver, primarily for a warrior on horseback. The bowcase was worn attached to the belt on the warrior's left side. The attachment fittings consisted of a characteristic loop through which a strap was fastened. A loop of this type with parts of a surviving strap was found in one of Birka's chamber graves (Bj1125b) (fig 49).



Figure 49. Bow case loop from burial Bj 1125b (Arbman 1943).

The closed quiver

The closed quiver that seems to have been used first by the steppe nomad warriors and to have subsequently spread at the time of the late Scandinavian Iron Age to south-eastern Europe, the Far East, and China, where it remained in use into the Middle Ages. The original homeland of the closed quiver was most likely the Eurasian steppes and the oldest evidence for its more widespread use can be dated to the 6th and 7th centuries AD. Representations from that period show that the quiver was present then in Central Asia, and that it spread to the Sassanid and Byzantine empires and Tang dynasty in China. Avarian graves in Europe also contain a few contemporary traces of closed quivers. In addition, the presence of Avarian closed quivers has been identified from the positions of arrowheads in graves. Since the quiver did not have identifiable metal mounts until the 10th century, it has been suggested that it might have been introduced to Europe even earlier than the archaeological records indicate, for example by means of the Huns (Coulston 1985: 273–274; Gorelik 2002: 129; Dwyer 2005). In Scandinavia the closed quiver has been identified in boat graves of the Vendel- and Viking-periods at Vendel, Valsgärde, and Tuna in Alsike from the arrowhead positions (Lindbom 1997a).

There is still no complete closed quiver surviving in the archaeological record because most parts of the quiver were made from perishable material: leather, bark, wood, textile, horn and bone. Its appearance has thus been reconstructed and analysed on the basis of archaeological finds in combination with pictorial representations of archers in Asia, the Far East and Eastern Europe. The Hungarian grave material is especially rich in finds of closed quivers since these were equipped with iron parts that survive. The most characteristic feature of the closed quiver is the result of its function to allow the arrow tips to point upwards, in contrast to the quivers normally used in Scandinavia where the arrow tips point down. This put demands on the archer and affected the form of the quiver since sharp arrow tips instead of feathers would have extended from the quiver mouth. On some quivers, the framing at the mouth includes an outward flap to accommodate the arrow-tips and an inward flap below them to protect the archer's hand and steer it to grip the arrows below the tip. This shape had thus a practical cause – to protect the archer's hand (Dwyer 2005).

The shape of the quiver varied and the form of its upper section had many individual variants. The arrow tips at the quiver opening were not always covered over, but usually some type of lid was in use,

as shown in many representations (Hidán 1996: 52; Révész & Nepper 1996: 45; Dwyer 2005). The base of the quiver was made of wood and often shod with a semicircular or oval iron frame. The total length of the Hungarian closed quiver was c. 80 cm from top to bottom (Révész & Nepper 1996: 45). The width of the quiver and its shape varied throughout its period of use in Eurasia. Images of archers show a range of quivers that are either slender, broad, straight, box-shaped or the hourglass shape. Shape and size depended on the number of arrows the quiver was to hold. According to Marco Polo's testimony, the Mongolian closed quivers could accommodate over 60 arrows. Many depictions

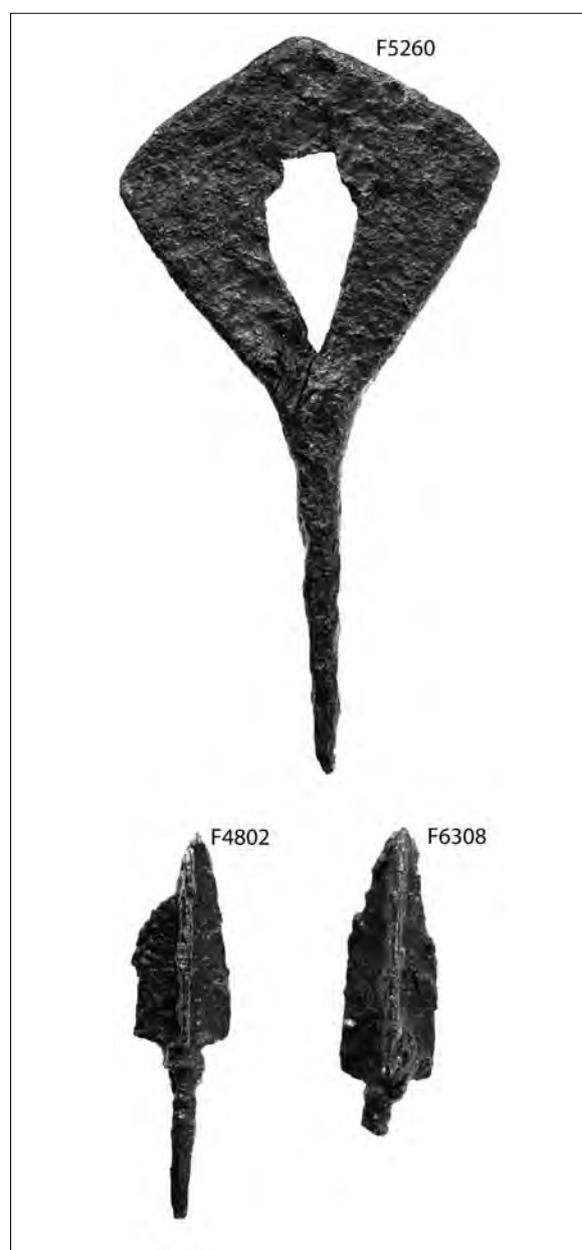


Figure 50. Some of the different types of arrowheads found in the Garrison (photo L. Bergström).



also indicate that quivers could be highly decorated (Dwyer 2005; Horvath 1996: 314; Nepper 1996: 264; Révész 1996a: 101).

Seven mounts from Birka's Garrison have been identified as belonging to closed quivers (fig 47). In addition, quiver mounts have been identified in grave Bj1125b (fig 48). The loops are very characteristic of the closed quiver and can be compared to similar finds from Eastern Europe. The iron parts that occur in the Hungarian material, contemporary with the finds from the Garrison, comprise mounts that either sat on the quiver body or were a part of the frame which surrounded the quiver – the preservation conditions of the finds do not always allow for a definitive answer. The quiver contained one or two loops often as part of the framing. These loops held straps that fastened the quiver to a belt (Sebestyén 1933: 42–58,83; Révész 1985: 52–53; Révész & Nepper 1996: 45; Zágórhidi 2000: 104). All the loops found in Birka's Garrison lacked adhering framework. They are both rectangular (three) and semi-circular (four), and their length varies between c 30 and 50 mm. The rivets, which attached them to the quiver, survive on some loops. The remaining quiver mounts and framing that occur in the Hungarian material are of various stages of preservation and length, and would be very difficult to identify from among the other types of iron mounts surviving in a disturbed find context such as Birka's Garrison (Holmquist Olausson & Kitzler Áhfeldt 2002). The closed quiver from grave Bj1125b had a frame or at least a more substantial mount with one identifiable attached loop.

Another question concerns the number of loops on the quiver. The closed quiver was usually strung by two straps from the belt in order to hang free from the waist and be angled with the opening to the front – of strategic importance when fighting. It would thus be natural for it to have two suspension loops of iron along one side. The finds however indicate that there were some variations in this and depictions have resulted in alternative interpretations. Some quivers had only one suspension loop of iron (Sebestyén 1933: 83; Zágórhidi 2000: 104). Loops have also been shown to occur together with hooks (Révész 1985: 51). Hooks have been found in the Garrison that could have been put to such a use. The reconstruction of a quiver from Karos-Eperjesszög makes use of a leather loop in combination with an iron loop (Révész 1999: 101). Some representations show horsemen with closed quivers that are fitted with only one suspension mount (Dwyer 2005).

Since seven loops have been found at Birka's Garrison, this means that there were between seven and four closed quivers on the site when it was abandoned.

In an undisturbed find context, a pair of loops would lie at a maximum distance of c.70 cm from one another (the average length of an closed quiver, 80 cm, less a small quiver lid, c. 10 cm). However in a battle field, which the Garrison seems to represent, the finds are too fragmentary and disturbed to allow for such an identification of a double looped quiver (Holmquist Olausson & Kitzler Áhfeldt 2002).

A brief note on arrows

The finds of arrowheads from the Garrison are very extensive and characteristically show a great variety of types (fig. 50). While Scandinavian forms dominate, a series of eastern types are represented and their number exceeds the norm for Scandinavia (Hedenstierna-Jonson 2006:56f, 73f; cf. Lindbom 2006:161ff). By way of comparison, the set of arrows in Bj1125b contains only Scandinavian types, which indicates that the composite bow did not demand a special type of arrow.

Among the more unusual arrow types was an arrowhead with rhombic-shaped blade with an opening for burning material of some sort. The arrow was intended for setting fire to the opponent's fortifications, or some such. Fire-arrows of this type are represented also among the material of the Magyars.

An archer's thumb-ring

The finds from the Garrison's hall building included a probable thumb-ring (fig. 51). The ring, of copper alloy, has an inner diameter of 26.5 mm and an outer diameter of 34.4 mm, and a 22.35 mm long lip, which narrows to a point. The ring is almost perfectly circular and remarkably thin, c.0.5 mm (0.9 mm where thickest). The inside of the ring is convex. The ring shows some damage where pieces have fallen away. One side of the lip edge and the corresponding sides of the ring's under and upper edges closest to the lip show an uneven and worn surface.



Figure 51. An archer's thumb ring from the Garrison (photo L. Bergström).

A thumb-ring serves as an aid to draw the bowstring by the thumb. It was used especially in various parts of Asia, where it is still found. The earliest evidence for this ring is in China, at least from the Shang dynasty (corresponding approximately to the Scandinavian Late Bronze Age), and it was possibly in use during the Neolithic period (Koppedraayer 2002: 19; Selby 2000, 2005). Thumb-rings have been used at different periods in the Far East and south-eastern Europe. A find of a thumb-ring of bone from the Roman garrison of Dura on the Sassanidian border shows that the technique of pulling the bowstring by the thumb was in use in that part of the world by the middle of the 3rd century AD. From the same period at Dura, well-preserved arrows were found on which the feathers were placed close to the notch— a less suitable solution, requiring that the fingers be used to draw the bowstring (James 1987). The Huns and Avars most likely practiced that hold (Avarian thumb-rings in bone are preserved from Hungary). It was probably under the influence of the Huns and Avars, that the Byzantine soldiers were trained to draw with the thumb. How long that technique continued to be taught is however uncertain; but it is not completely impossible that this training was also the praxis in the 10th century (Coulston 1985: 277; Nicolle 1998: 54; Haldon 1999: 215).

In Europe two or three fingers were traditionally used to draw the bowstring. There are no known thumb-rings from any prehistoric Scandinavian contexts and the local use of the thumb-ring in this part of the world is considered highly improbable. In eastern Europe, finds from the 10th century are very few, and there are none from the area of the Magyars. It has however been proposed that the Magyars probably used the thumb hold possibly with a leather protector or rings of perishable material such as horn (Sebestyén 1933: 74–76). There are examples of Volga-Bulgarian thumb-rings of bone from the 12th/13th centuries, but the Bulgarian thumb-rings of metal that are contemporary with the Birka Garrison ring are of special interest (Iotov 2004: 31; Poljakova & Zilivinskaja 2005). The thumb hold as a technique, and

the thumb-ring as an artefact, were in any event used in the areas in contact with 10th century Birka, even if it is uncertain to what extent it was used in these areas.

It can be questioned whether the Birka ring is in fact a thumb-ring since it differs in many ways from other rings. At the same time, the total number of finds of thumb-rings is limited and non-existent in Scandinavia. There are no parallels for comparison. The worn areas on the ring are of interest. In a modern reconstruction of a thumb-ring it is just these areas that that are most worn if the right hand is used as the ring-pulling hand. A right-handed (right-eyed) archer – which would be the majority – uses the right hand as the pulling hand. Analyses of the damaged surfaces not only support arguments for the use of the ring as a thumb-ring, but also indicate that if this is the case, the ring has also been used, not just carried, by a warrior who used the thumb hold. It is further relevant that this possible thumb-ring comes from Birka's Garrison with its hall building and the elitist status accorded to such an archaeological context (jfr Lundström 2006: 17f).



Figure 52. Reconstruction of an archer with Eastern equipment, based on the archaeological finds from the Garrison (drawing by E. Ahlin Sundman)



Other dress and equipment of the eastern archer

A series of characteristics of dress and other equipment can be associated with the eastern archer. The eastern fashion of dress which dominated in the Eurasian steppes and which was also characteristic of the Magyar warrior, has been found to a marked degree in the Garrison and can be complemented by some grave finds in Birka's cemetery (fig. 52).

The caftan, or horse rider's coat, which was used by the warrior class in the areas of the Rus', reflected a growing oriental/eastern influence and was probably the result of long years of contact with the steppe nomads and the Arabic cultural sphere (Jansson 1987:799; Jansson 1988:60; Hedenstierna-Jonson & Holmquist Olausson 2006:47f). Traces of caftans have been identified in several of Birka's graves. The caftan which could be decorated with silver and gold threadwork and tablet-woven bands, was sometimes fastened with small bronze buttons (Geijer 1938; 1980; Hägg 1983; cf. Ierusalimskaja 1996). Buttons of this type have been found together with five of the identified caftans (Bj56, Bj414, Bj716, Bj949, Bj1074) and occur also in grave Bj1125b, which is especially interesting in this connection and which we will return to below. The caftan was held together at the waist by a belt. The belt was an important coming-of-age symbol and also indicated a certain position in society. The eastern belt was formed in a way that differed from the western ones in decoration and shape, also to some extent in function. The belt held one's weapons and sometimes there was a distinction between a belt for blade weapons and one for the bow. The western belt was usually complemented by a baldric for the sword.

In Magyar culture, the oriental belt also included a belt pouch, a '*sabretasche*'. Decorated with mounts or ornamented bronze plates, the pouch further marked a warrior's rank and status. The belt pouch could be formed as a stylish complement to the bowcase where the mounts on the pouch and case were decorated in a similar manner. In the hall building a series of different mounts have been found which may have belonged to both pouches and cases. These mounts are decorated with a palmette motif in a style that is usually termed Sassanidian or post-Sassanidian but which, as here, is more likely of Volga-Bulgarian origin (Hedenstierna-Jonson & Holmquist Olausson 2006).

The eastern archer's technical features and advantages in battle

The composite bow was a weapon with many technical advantages in battle compared to the simple bow that was widespread in Scandinavia during the 10th century. The Magyar's composite bow had for example an effective cast of c. 200–250 metres with very high precision at c. 60–70 metres, in comparison with the English long bow, normally considered the most developed single bow, with an effective cast of c. 100 meters ((Hidan 1996: 47; Révész & Nepper 1996: 44; Cederlöf 2002: 107). Variation in hit accuracy, the result of different draw-lengths, was also less for the eared reflexive composite bow than for the simple single bow. This was due to the longer draw allowed by the composite bow (Rausing 1967: 146–147). A greater draw-length meant that the composite bow could be made short – hence the English term 'short bow' (Bradbury 1997: 12). The short length of the composite bow made it very manageable, which was a great asset, for example on horseback.

The thumb hold had many advantages compared to the two or three finger hold. The thumb hold gave additional speed to the arrow in flight by concentrated energy (the thumb touches the string less than two or three fingers do) (Webb 1991: 41; Koppedrayner 2002: 12–13). The thumb hold resulted primarily in more rapid and smoother firing, that is to say re-firing (Koppedrayner 2002: 14, 60–61; Karasulas 2004: 24). The thumb hold also facilitated a greater draw-length. This meant that the archer could take better advantage of the bow's potentials, giving the arrow more force and thereby a longer cast and greater penetration (Coulston 1985: 276; Koppedrayner 2002: 13). It has often been maintained that the thumb hold takes a longer time to master than other holds (Webb 1991: 41; Karasulas 2004: 24). The technique was multifaceted with countless possibilities for refinement as is evidenced by the many schools, traditions and opinions recorded in Chinese, Arabic and Persian texts (Koppedrayner 2002: 23–24, 43–47; Selby 2000). A warrior from Birka's Garrison who used the technique would most likely have trained for a considerable period in an environment where the hold was frequently used, or with someone who mastered the technique well enough to be able to use it effectively.

The distinctive closed quiver was an important complement to the composite bow. The placement of the arrows in the quiver with tips upward and the forwardly sloping upper section of the quiver, meant that speedily and without turning to look, the arrows could

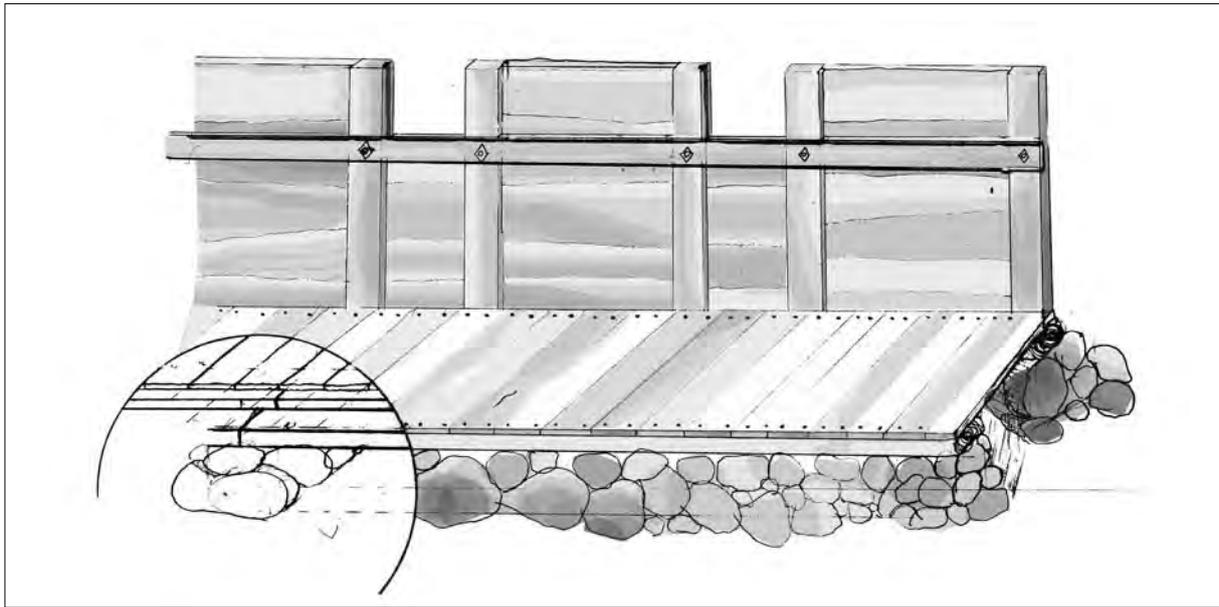


Figure 53. Reconstruction of the fort rampart (drawing by J. Lindeberg).

be gripped as a bunch, and by a simple hand movement be moved to the bow and bow hand. Gripping several arrows at the one time at the feather end and then placing them in the bow hand demanded a more complicated movement and also increased the chance of the arrows sprawling. Such an arm movement becomes even more complicated on horseback in a stressed situation, and control over the arrows is diminished. The quiver was optimised for the rapid and effective use of arrows in a fighting situation. For long-term storage, this quiver construction damaged the feathers, leading to unusable arrows (cf. Lindbom 1997b: 250; Lászlo 1999: 43; Dwyer 2005: cf. Révész & Nepper 1996). The superior features of the closed quiver spread throughout areas of conflict, being suited to situations in which the archer's equipment had demands other than those of, for example, target boards and hunting; and needed to be useful against heavy armour and when vision was impaired by a helmet. It was an adaptation towards more effective horseback fighting, with arrows fired at great speed, especially when used in combination with a thumb-ring. This argument is strengthened by the oldest depictions of closed quivers, where a remarkably high number show it being used by armour-clad horsemen.

While the closed quiver was designed for the mounted warrior, this did not exclude its use by foot soldiers. A number of representations from Middle Eastern and Byzantine contexts illustrate such a use (Karasulas 2004: 51; Dwyer 2005). The closed quiver's specific form of suspension allowed it to hang more freely than traditional quivers, which hampered the archer's mo-

vements. The use of the closed quiver even by foot archers in the Middle East emphasises its superior technical qualities in battle.

Thus the archery equipment of the steppe nomads demanded extensive training but was also advantageous to its user (cf. Lundström 2006: 25–34). In the first place it provided increased arrow refiring speed, cast and penetration. Such characteristics were most likely more significant in the battle-field than, for example, precision. Placing great emphasis on power and penetration might not be so obvious to the modern observer, but in order for an arrow to be fully effective it must be able to penetrate through the opponent's armour. This becomes highly relevant in the fighting context of the Garrison with its lamella armour and chain mail. The unique find of lamella plates in the Garrison has appeared to many as an anachronism since contemporary parallels do not exist for Scandinavia. However, together with the composite bow and the closed quiver, lamella armour creates the complete accoutrement of the East Asian steppe warrior (Stjerna 2001; 2004).

Archery and fortifications – the case of Birka

Birka's fortifications can appear difficult to defend because of the extensive linear rampart structure and the number of gates. Part of the problem is whether the fortifications were a defensive construction or one with other primary functions. Fortifications of linear character are a typical feature of Scandinavian warfare during the Viking-period. Forts and fortified camps



were utilised as bases in offensive warfare and served as a tool in the actual fighting process whereby the opponent could be enticed to attack the rampart, and once there surrounded and killed (Halsall 2003:156; 206f; Hedenstierna-Jonson 2006:66f; Holmquist Olausson 2002a, 2002b).

Archery was probably one of the most important fighting techniques in Birka's active defence. The long cast and power of continuous showers of arrows fulfilled most of the requirements for the type of fighting demanded by the defence of Birka and the Mälaren. The construction of the fort with its archer's walks along the rampart inside the wooden palisade (fig. 53), shows clearly that the fortification was planned and constructed with archery in mind. The advantages of the eastern composite bow were apparent even in siege warfare. The increased accuracy it allowed was more successful in tight situations and in close fighting, something which definitely occurred inside the fortification ramparts.

An important question is the extent to which the Garrison's warriors mastered archery while on horseback. It should be noted that carrying a closed quiver together with a bowcase would cause considerable clumsiness for a foot soldier, especially if also bearing other equipment. Thus, in a way, the presence of the closed quiver and bowcase are in themselves an ar-

gument for this equipment having been used from the back of a horse. Fighting on horseback would not have been a feature at Birka itself – the island is too small anyway – but some connection between warriors and horses does occur in the chamber graves. The use of the mounted archer should instead be understood in terms of the greater defence of the Mälaren and its estuary, where patrolling was needed for defending the vast area around the lake and its archipelago terrain.

So while it is not possible to equate the technique of the mounted steppe nomads with that of the Birka warriors, the finds do indicate that the Scandinavian warriors learned from the steppe nomads how to master archery even on horseback (cf. Lundström 2006: 32f). This advanced art of fighting required years of training, which in the case of the nomads most certainly began at a very young age. Though the Birka warriors came into contact with the nomadic peoples over long periods, their training probably started in adulthood. At the same time, the Scandinavians probably trained at an early age in Scandinavian-style fighting techniques and horsemanship. Important support for the occurrence among Birka's warriors of some who mastered mounted archery, is to be found in chamber grave Bj1125b, mentioned already.

A buried archer (Grave Bj1125b)

Despite the fact that grave Bj1125b is partly destroyed by a later burial (Bj 1125a), it provides a very interesting parallel to the material found in the Garrison. The grave contained the complete equipment of an eastern type archer. A horse was buried on an adjacent ledge (fig. 54). While the objects in the grave are described by Holgar Arbman as fragmentary (Arbman 1943:463–465), they still provide a complete picture of the eastern archer's weapons.

The grave also included a cluster of ten arrow-heads, the closed quiver mount and bowcase loop mentioned above, a shield boss, a frostnail, an iron knife, a fire-steel, a whetstone, an iron key, a caftan button, horse fittings and possibly a spearhead (this might belong to burial Bj1125a). The grave can be dated to the 10th century. It also produced metal threads, probably belonging to some form of headgear.

Inga Hägg has ranked the clothing remains from the 37 male graves in Birka according to symbolic rank, and 'systematized the material according to contemporary values of status' (2006:115). She studied the occurrence of headgear containing metal components, silver and gold, among which she isolates three types. Uppermost in the hierarchy is a pointed cone-shaped

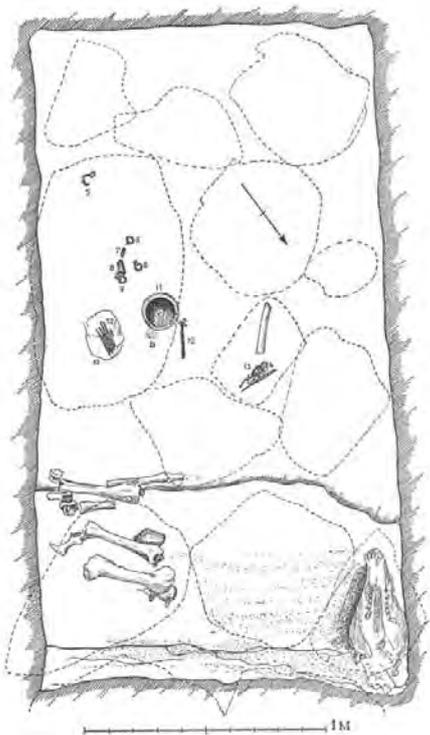


Figure 54. Burial Bj 1125b (Arbman 1943).

head gear, which can be traced back to the old Nordic pointed helmet crown (type IA). In Hägg's typology, the headgear in grave Bj1125b belongs to type A3. This would mean that the deceased was a member of the *hird*, but not among those of highest rank. However grave Bj1125b stands out from the rest of this group. It lacks other shared diagnostic features of these burials such as the ring-pin brooch and/or battle-axe. Hägg, who considered the grave to be disturbed, did not observe the presence of eastern archer equipment, which in itself is an isolated phenomenon among the c.100 weapon graves on Birka. It is possible that what we have here is a member of the *hird* who came from a different cultural background.

If the contents of the grave are interpreted from the viewpoint of fighting techniques, this would mean that the deceased was able to use the bow from horseback. The most telling argument in favour of this, is that except for the possible spear, the grave lacks weapons that are not related to archery. The only items that could possibly be considered of high status are the horse, the closed quiver, and the bowcase. This technically advanced archery equipment can also be linked to finds from the Garrison. The caftan button strengthens the impression of eastern influence. Three other graves at Birka have equipment that could indicate they contained mounted archers: graves Bj727, Bj872 and Bj975 (Arbman 1943: 252–253, 340–341, 401–402; Thålin-Bergman 1986: 6–10). These also contained arrowheads in combination with a horse, and had only the spear and shield as additional weapons, if any. However, they differ from grave Bj1125b in that they lack closed quivers or bowcases. This reading of grave content considers only fighting technology and does not take into account other factors – taftonomical, social, cultural or religious – which influenced a buried person's accoutrements. It is however difficult to explain why 'poor' weapon graves were equipped with various weapons and as in this case a very special set, without wondering if the explanation for the set is to be found in terms of the fighting technique practiced by the deceased. There must have been at least an awareness among those who arranged the burial, concerning the technical dimension of this combination of objects that were deposited, irrespective of whether the buried person was the one who used the weapons or not. The occurrence in the grave of a spear and shield is also very interesting in terms of 10th century fighting techniques. The bow was complemented by the spear (as a lance) and shield, in the steppe nomadic warrior's weapon-kit and also among mounted soldiers in the Byzantine empires and Sassanid Persia during

the later part of the Iron Age. There is nothing contradictory in being equipped with a lance, shield, and archer's bow at the one time. This could be a tactical choice since the same rider could be used in a shock troop as well as a foot archer. Examples of such combined equipment can be found in Byzantine sources from the 6th century. According to Chinese sources this was the typical weapon-kit of the Turkish mounted warriors of the period of the late Scandinavian Iron Age. The Byzantine and Sassanid way of fighting was thus passed on by the influence of the steppe nomads, in the same way as the practice of bearing lamella armour had been (Coulston 1985; Nicolle 1998: 104; Haldon 1999: 215–216; Haldon 2002: 68; Gorelik 2002: 141, XI–3, XI–10). The archery equipment can thus be associated both with the fighting context of Birka's Garrison and with an individual person in the grave in Hemlanden, which provides further insights into how the equipment was probably used.

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