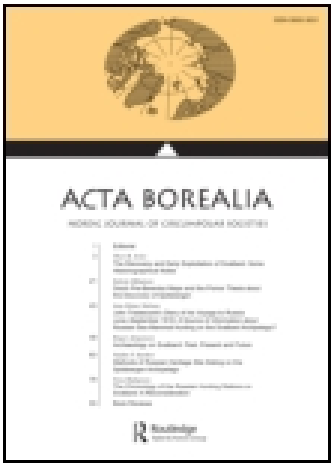

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Wretchedly poor, but amazingly practical: Archaeological and experimental evidence on the bone arrowheads of the Fenni

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Wretchedly Poor, but Amazingly Practical: Archaeological and Experimental Evidence on the Bone Arrowheads of the *Fenni*

Janne P. Ikäheimo, Juha-Pekka Joona and Mikko Hietala

The paper discusses two assemblages of bone arrowheads found in the excavations of a Bronze Age and an Iron Age burial site in northern Ostrobothnia, Finland. Arrowheads of this type are mentioned in AD 98 by Tacitus, the Roman historian, as a feature underlining the poverty of the *Fenni*, a tribe which has been variedly identified as the ancestors of either the Finns or the Sámi. However, experiments carried out with replicas of the bone arrowheads recognized from the archaeological material provide evidence of objects characterized by excellent performance characteristics. Finally, based on the results of the experiments, as well as on archaeological evidence regarding the distribution of these artefacts, it is suspected that the use of bone arrowheads in prehistoric Fennoscandia was more widespread than has often been thought.

Introduction

In AD 98, the Roman author Publius Cornelius Tacitus published *Germania*, a treatise on the German tribes living on the margins of the Empire. In the concluding paragraph of his work, Tacitus offers a short but elucidating description of a tribe called the *Fenni* (Tac. *Germ*. 46). Ever since the tribe has been identified as the ancestors of either the Finns or the Sámi, located within the boundaries of present-day Fennoscandia. It has been stressed that the living habits of the *Fenni* better match the presumed way of living of the Sámi than the one of the Finns, who had supposedly adopted agriculture by the time Tacitus wrote his description. It is quite fruitless to dwell on this argument here, however, as the debate on the true identity of the *Fenni* will most certainly be continued on the basis of Tacitus and other historical sources, even without our input (e.g. Milan 2001; Carpelan 2003: 57–58; cf. de Anna 1988: 51–52; de Anna 1997: 217).

Instead, the aim of this paper is to discuss, and perhaps decipher, a passage in Tacitus' description, which, in our opinion, should be re-examined in light of

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recent archaeological evidence. The passage reads in Latin as "*solae in sagittis spes, quas inopia ferri ossibus asperant*" ["their only hope in their arrows, which, for want of iron, they point with bones"]. Hence, according to Tacitus, the *Fenni* were so wretchedly poor that they were forced to use bone for their arrowheads instead of iron. Still, the significance of the passage is somewhat ambiguous. It certainly presents the *Fenni* as a group living in great poverty, but on the other hand, it indicates that the *Fenni* could count on the effectiveness of their bows and arrows.

Two questions, which form the core of this paper, spring forth from this positive connotation that Tacitus' passage may comprise. First, is there much archaeological evidence on the use of bone arrowheads in prehistoric Fennoscandia, particularly in Finland? Second, what are the main performance characteristics of these bone arrowheads, when their modern replicas are tested experimentally? Two assemblages of bone arrowheads, both excavated fairly recently in northern Finland, will be introduced, together with short reviews of their find contexts. This is followed by a summary of the results of archaeological experiments performed with replicated arrowheads.

It will be argued that to an outside observer, such as Tacitus, the *Fenni* may have appeared as a wretchedly poor and miserable people, because their material preferences regarding arrowheads, among other things, did not necessarily meet the standards of the civilized Mediterranean world. But when speaking of performance characteristics, bone arrowheads seem to have been practical. The practicality becomes evident when compared, for example, with so-called straight-based arrowheads, which were fabricated using various rock types during the early Bronze Age, especially in northern Finland. It will also be argued that, on the basis of archaeological evidence, the use of bone arrowheads in prehistoric Fennoscandia was more widespread than has usually been thought.

Archaeological contexts

When it comes to the use of bone, it is hardly possible to open a textbook and not find at least a passage on the use of arrowheads among other bone tools in prehistoric Finland (e.g. Huurre 1995: 38, 188; Huurre 1998: 148–149). However, as discussed later, the factual archaeological evidence is quite scarce, mainly due to podzol (see Petäjä-Ronkainen et al. 1992), the prevailing acidic soil type in the boreal forests of Finland.

Bone does not normally preserve in podzol soil unless it was charred prior to its deposition and, for this reason, the majority of prehistoric bone artefacts in Finland pertain to cremation burials (e.g. Edgren 1969). Less frequently, bone objects can be found on a dwelling site in the margins of a fireplace, but

arrowheads are seldom found in such context. Hence, it is hardly a wonder that both archaeological contexts to be introduced shortly—Hangaskangas and Välikangas—both located within the boundaries of the city of Oulu, are cremation burials.

For the aforementioned reason, the distribution of bone arrowheads is evidently biased towards the northern parts of Fennoscandia, where the combination of calcareous soils (Solberg 1911: 352) and favourable climate has resulted in better conditions for their preservation. Hence, bone arrowheads have been found more frequently at dwelling sites from the zone that ranges from Finnmark (e.g. Sundquist 1999: 52, Fig. 6) to the Kola Peninsula (e.g. Gurina 1987: 42, Fig. 5). The most exceptional site in this area is the Mestersanden dwelling place, located on the island of Kjelmøy on the southern shores of Varangerfjord. The early nineteenth century excavations (see Solberg 1909, 1911) at this early Iron Age site resulted in a rich collection of bone artefacts comprising fish hooks, harpoon points and knife handles as well as some 250 arrowheads. Although 12 arrowhead types have been recognized from this material by using the variation in form as the main criteria, none of them can be assigned a precise date. Instead, the production of some types seems to have continued throughout the last stages of prehistory (Olsen 1984: 41–43).

The history of bone and antler projectile points, however, is even longer than the one of bows and arrowheads. Some of the earliest examples known to date are 20,000 years old, i.e. late Paleolithic *atlatl* points made of deer antler (Pokines 1998: 875–886). The evidence on the earliest use of bone artefacts in Finland is sporadic, but it consists of a few well-known cases. The Antrea find (Pälsi 1920), for example, which is better known for its fishing net dated to the eighth millennium BC, also contained a substantial selection of bone tools: an axe, two chisels and a spearhead with inlaid quartz microliths. On the contrary, evidence on the use of bone artefacts in Finland during the Neolithic is practically non-existent. Still, there is substantial evidence regarding the wide distribution of the bone and antler industry in northeastern Europe during the late Neolithic. Bone artefacts have been found, for example, at several lacustrine sites in northern Bielorussia (Dolukhanov and Miklyayev 1986: 87, fig. 8), while the excavations at Hemmor dwelling site on Gotland also yielded a vast selection of bone points and fish hooks, in addition to a roughly shaped arrowhead (Wallin and Martinsson-Wallin 1996: 22–24, figs 11–13).

1. Hangaskangas

The Bronze Age cremation burial of Oulu Hangaskangas was discovered in 1997 on the eastern bank of the Oulu–Kontiomäki railroad, near the south-eastern-most tip of the Hangaskangas sand esker formation, some 20 km

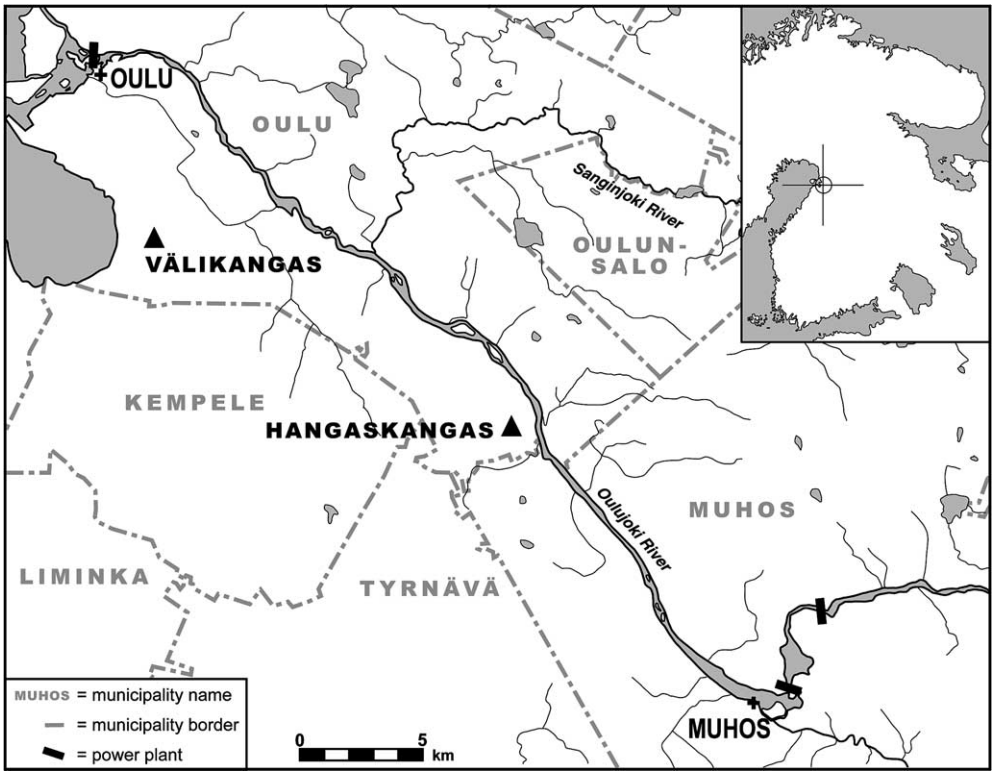

Fig. 1. The location of Hangaskangas and Välikangas sites.

southeast of the city of Oulu (Fig. 1). Unfortunately, as the discovery was made from a path frequently used to train racehorses, the excavators could not conclude much about the structure of the burial. In the report of the 1998 excavations (Forss and Tuovinen 2001; see also Hamari 2000: 145) it is suggested, however, that the burial had been dug into a natural, mound-like sand dune and covered with a slab of mica-schist. Whatever the original structure might have been, this find is, even to date, the first and only Bronze Age burial ever found in northern Finland. It has been recently AMS radiocarbon dated to ca. 1800 BC.

On the basis of osteological remains, the deceased has been identified as a male, at least in his 30s. He had been buried with a plentiful selection of objects, including a bronze spearhead, a riveted bronze object of uncertain function, as well as several straight- and concave-based arrowheads fabricated in quartz, metabasalt and quartzite (Fig. 2). However, the most interesting group of finds, at least regarding the theme of this paper, consists of arrowheads and other objects fabricated in bone. Apart from the arrowheads, other bone implements consist of both oddly shaped decorated bone inlays and densely perforated strips of bone. It has been proposed that the latter were

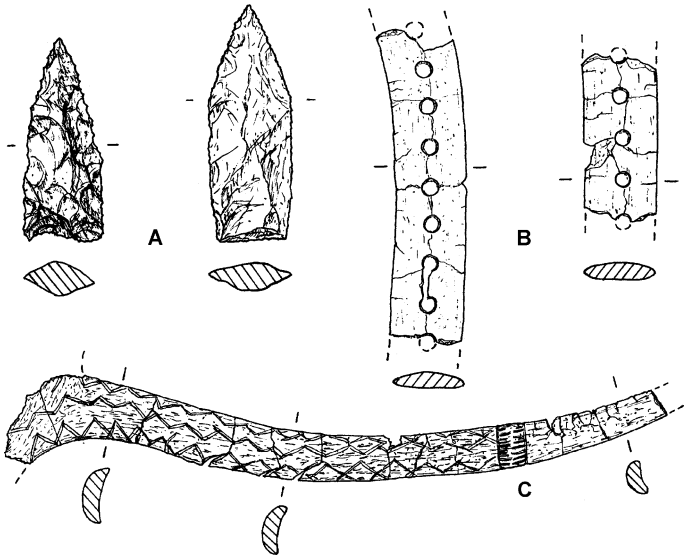

Fig. 2. Finds from the Hangaskangas cremation burial: (A) straight- and concave-based stone arrowheads, (B) perforated bone strips and (C) decorated bone inlays.

reinforcing the mouth of a hunting case or a quiver, while the inlays were probably used to adorn the object.

About a dozen arrowheads of varying completeness have been put together from the pieces of charred bone found in the burial. The estimated quantity has been derived from the preserved tip and base fragments. Regarding the form of these arrowheads, they clearly fall into two main types (Fig. 3). A narrow, elongated body showing a pronounced median ridge towards the distal end of the arrow and a gently tapering base characterizes the first type (see Olsen 1984: 42, type XI). The second type is also equipped with a median ridge, but the blade seems to widen out—resembling a willow leaf in shape—towards the base (see Gjessing 1942: 232, fig. 182; Olsen 1984: 42, type X). The cross-section of both blade types is biconvex in the middle, but turns gradually into a lozenge towards the distal end. In order to render the hafting of these arrowheads easier and, in particular, to produce a firm joint with the shaft, both types have flattened-down bases with an oval section. The original length of these arrowheads, which have shrunk as a result of having been exposed to fire, ranged from 12 to 17 cm.

Although the want of direct parallels is one of the characteristics of the late Stone Age as well as the Bronze Age, it is possible to point out some finds fairly similar to the arrowheads found at Hangaskangas. For example, one can turn to the western shore of the Bothnian Gulf, where an intact bone arrowhead—probably dating to the late Stone Age—was found in the early twentieth century from Kattisträsk in Norsjö parish, Västerbotten (Huggert 1993). This find is of considerable interest, because its shape and the way it was produced

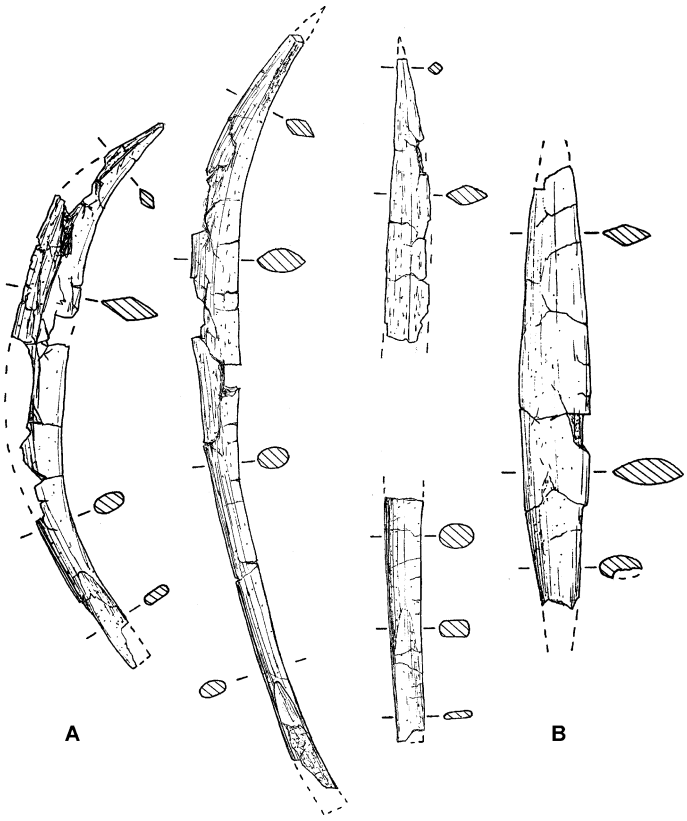

Fig. 3. A selection of bone arrowheads from Hangaskangas: (A) elongated and (B) willow leaf-shaped.

resemble closely the late Neolithic slate arrowheads of so-called Pyheensilta-type. A somewhat later parallel to the Hangaskangas arrowheads comes from Kotokallio in Lieto parish, where a cremation burial had been made into a large stone cairn. The finds consisted of a bronze dagger, a bronze needle and a bone arrowhead (Edgren 1969: 77, Fig. 2).

In the last case, rather than being a grave good, the bone arrowhead may have been the cause of death—possibly of a woman—because unlike the bronze artefacts, it had been subjected to the flames of the funeral pyre (Edgren 1969: 78–81). The same interpretation has been applied to eight bone arrowheads found in the Bronze Age cremation burial of St. Vikers (Lärbo) in Gotland (see Rydh 1968: 164), which match quite closely both in type and size with the Hangaskangas arrowheads. In addition to the few examples presented above, there is also substantial evidence on the use of bone arrowheads in the late Bronze Age and early Iron Age (e.g. Tallgren 1919: 69, fig. 63; Olsen 1984).

2. Välikangas

Prior to the excavations of 1987–1988, the site of Oulu Välikangas (Fig. 1) was known to consist of four cairns, but only their archaeological exploration revealed a dozen burials and about 70 artefacts (e.g. Mäkivuoti 1992: 344–349). The Välikangas cemetery, as it should probably be defined, comprised nine inhumation and three cremation burials, all dating from the early Roman Iron Age to the Migration period (< AD 550/600). The rich corpus of finds includes iron spearheads, axes, swords and knives, together with bracelets and rings of silver and bronze, and a great variety of minor implements. However, the selection of bone artefacts is limited to two combs and at least five arrowheads (Fig. 4), all of which were discovered together in the cremation burial 2:2. (Mäkivuoti 1996: 18–19).

When compared with the finds of Hangaskangas, the Välikangas arrowheads represent a distinct point in the evolution of this long-lived form. This is hardly a surprise, because the difference in chronology between the two sites is approximately 2000 years. Due to the absence of readily datable objects, burial 2:2 has been estimated to date between the late Roman Iron Age and the Migration period, possibly to the fourth century AD. All arrowheads at Välikangas are elongated, about 10 cm, prickle-like and triangular in section (see Olsen 1984: 41, type IX). For this reason they recall a needle *bodkin*, an arrowhead commonly used in warfare during the Iron and Middle Ages, rather than the cutting ones used in hunting. However, one of them (NM 245975:7,

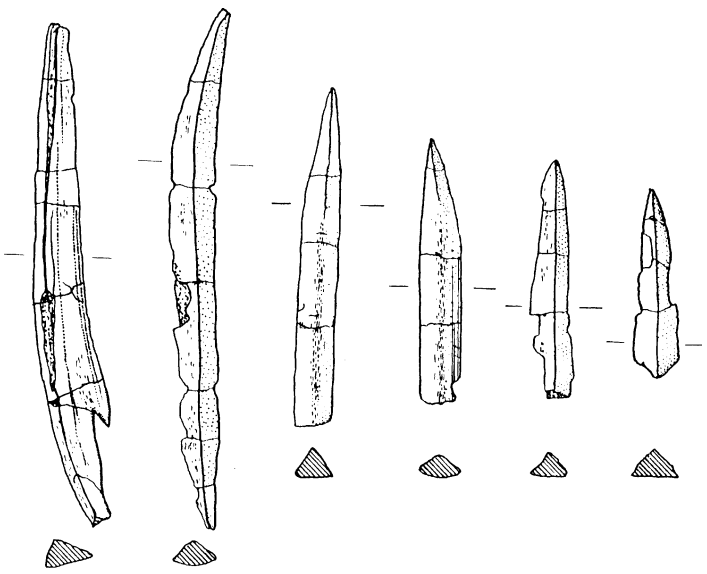

Fig. 4. Välikangas bone arrowheads are characterized by a triangular section.

see also Olsen 1984: 41, types II and III) differs slightly from the others by having a barbed shoulder and an incised ornament consisting of a single longitudinal line. The significance of the lines and other, often more complex, decorations (some of which may be interpreted as ownership marks) on bone arrowheads has been linked to the mode of exploitation of local resources (Olsen 1984: 106–109; Olsen 1994: 135–138). However, the solitary example from Välikangas does not allow us to develop the argument further here.

In general, bone arrowheads—usually triangular in section—become a fairly common component of grave goods in cremation burials between the late Roman Iron Age and the early Migration period. Moreover, the custom was practised vigorously only in a zone extending from southern Ostrobothnia in Finland (Kivikoski 1947: 38, plates 36.293–294; see also Cleve 1943: 135), through Västernorrland (Selinge 1977: 256–285), to Gotland (Nerman 1935: 88; Taf. 56: 601–607). Meinander (1950: 88–89), who already noticed the close resemblance of bone arrowheads and other small utilitarian items (e.g. tweezers, bone spindle whorls, clothing needles) between these areas, has also referred to the absence of parallels in the Migration period burials in eastern Baltia (see also Luik 2003).

Regarding the composition of the grave goods (NM 24597:4–14), burial 2:2 stands out as an interesting exception at the Välikangas cemetery. In addition to the bone objects mentioned above, it contained only two iron knives and a small pottery vessel in an asbestos-tempered fabric. The excavators also recovered 2120 g of burned human bones (NM 24597:15), an amount which seems excessive to have resulted from the cremation of one individual only. If so, the burial may be assumed to contain the remains of two women (Mäkivuoti 1996: 108, cf. Huurre 1995: 249) who had received only a moderate but an equal selection of grave goods. If the evidence—particularly the presence of asbestos-tempered Kjelmøy pottery, which is repeatedly associated with the Sámi (cf. Carpelan 2003: 60)—is interpreted in the boldest way, these women were partners that the Finns dealing in furs on coastal northern Ostrobothnia had obtained from among the natives they traded with. The broad outline of the preceding interpretative construction is indirectly supported by the results of a recent osteological analysis, which has confirmed the presence of two individuals—at least one of which is a woman—in this burial (Mäkivuoti, pers. comm, 2003).

3. Attempts of interpretation

When the significance of bone arrowheads in the Migration period burials of southern Ostrobothnia was evaluated, hardly any attention was paid to the context of these finds. Bone arrowheads have been found at 15 sites altogether, all of which were excavated during the first half of the twentieth century. A

dozen of these finds can be linked with a specific burial in a stone cairn, and the sex of the deceased can be inferred on the basis of the grave goods. A feature that emerges even with a superficial examination is the absence of weapons in all but one of these burials. Instead, most graves seem to contain feminine objects, such bracelets and brooches, bone spindle whorls and combs. The presence of bone arrowheads in female burials has been interpreted to associate the deceased with the goddess Skade who used to hunt with such implements (Heidenberg 2002: 23 citing Hjørungdal 1991: 270). However, as also suggested by the double cremation burial at Välikangas, women may also have participated in hunting during the early Iron Age (see also Heidenberg 2002: 23).

The significance of this custom has also been interpreted more reservedly. Meinander (1950: 132), for example, claimed that the only certain conclusion to be drawn is that bone arrowheads were put into graves during this period. However, he developed the argument further, suggesting that, when placed among the grave goods, bone arrowheads were a way to give the deceased a chance to hunt in the afterlife. From this he further deduced that hunting was probably a crucial means of subsistence among the Migration period society in southern Ostrobothnia; especially when sickles, scythes and shears are absent from these burials. A somewhat similar result was reached earlier by (Salmo 1938: 258), who concluded that bows were rarely used in the Migration period, but when present, were used more for hunting than for warfare (see also Sjøvold 1974: 291–292). It is probably worth mentioning here that the principal study on the distribution of iron arrowheads in Iron Age Finland lists only 371 examples (see Hiekkanen 1979).

With regard to the late Iron Age, an example stressing the rarity of arrowheads—both in bone and iron—is the Luistari cemetery at Eura, the excavation of which has resulted in the identification of over 1300 burials. At Luistari, arrowheads in bone are absent, while iron arrowheads are rare before the late Viking Age (Lehtosalo-Hilander 2000: 204). The general absence of arrowheads has been explained by referring to specific conventions in local burial customs. It has been claimed that, unlike axes or swords, bows were not regarded as personal items and, therefore, were likely to have been used by several people rather than being buried with the deceased (Lehtosalo-Hilander 1982: 40). However, the increasing presence of iron arrowheads towards the late Viking Age is said to reflect the increased status of hunting in society (Lehtosalo-Hilander 2000: 206). On the other hand, the absence of bone arrowheads in the late Iron Age may pertain to a change in burial customs. The prevalent type of burial was now inhumation, in which bone objects were only occasionally preserved.

Experimental archaeology

In order to test the usefulness of bone arrowheads, especially compared with contemporaneous stone and iron arrowheads, the following small-scale experiment was arranged. Although its principal aim was to examine the aptitude of penetration for arrowheads made of different materials, their durability and suitability to different tasks, in particular to hunting and warfare, were also tested. The target used in this experiment was a reindeer (*Rangifer tarandus*), a year old buck that had been put down on the previous day due to inflammation. The animal was provided by the zoological gardens of Oulu University, where the experiment was also conducted. For the sake of the experiment, the reindeer was propped up into a standing position with ropes (Fig. 5).

In total, 10 arrows were shot during the experiment: two were equipped with a straight-based arrowhead of quartz, four with arrowheads of bone or antler replicating the types found at Hangaskangas (Fig. 6), two with a Sunderøy-type schist arrowhead and, finally, two with an iron arrowhead. Of the last-mentioned, one was leaf-shaped, while the other was equipped with a transverse point. Applying modern equipment in the making of all arrowheads ensured a uniform outcome. The weights of the resulting arrowheads were 5.0–6.2 g for bone, 3.5 and 3.9 g for slate, 2.1 and 4.9 g for quartz and 10.0 and 12.0 g for iron.

Half of the bone arrowheads used in the experiment were composed of metacarpal and metatarsal bones of an elk; wild forest reindeer (*Rangifer*

Fig. 5. A recently deceased reindeer was used to assess the impact of various arrowheads.

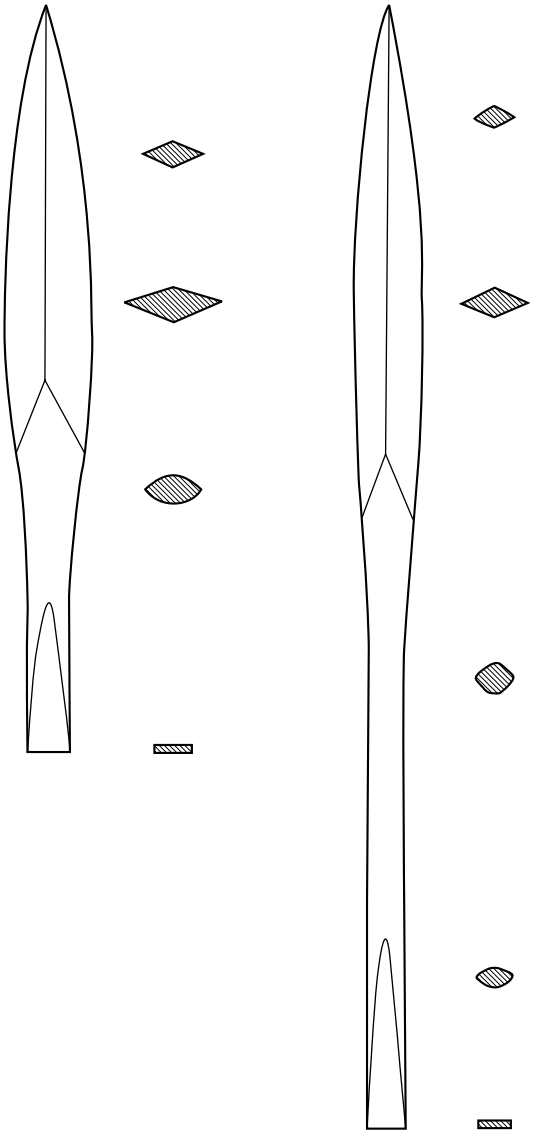

Fig. 6. Two bone arrowheads replicating the design of the Hangaskangas finds.

tarandus fennicus) antler was used for the other half. As for the size of the bone arrowheads, the ratio between the archaeological finds and modern replicas was estimated as 1:1.1, because when burned, bone contracts by at least 10%. Shafts were predominantly made of pinewood, although in three cases elm wood was used. Arrowheads were attached to the shaft with a combination of conifer resin and a sinew binding, although, due to their shape, the use of the latter method was out of the question in the case of stone

arrowheads. The total weight of the arrows with a bone or a stone tip ranged between 28 and 33 g.

The velocity of the arrows shot was not measured during the actual experiment, but was determined afterwards with arrows of an equal weight using a chronograph (Competition Electronics ProChrono). The bow used in the experiment was a flat bow made of elm wood. Its design was based on a bow found in Muldbjerg in Denmark (Troels-Smith 1959), even though the replica was made slightly taller and broader than the original. Archaeological evidence indicates that this kind of bow was used in Fennoscandia from at least the Neolithic to the Bronze Age. As the draw weight of this bow was 40 pounds at 26 inches of draw; the potential energy stored in the bow amounted to 41.9 J.

As shown in Table 1, the initial velocity of the arrows varied between 39 and 42 m/sec. The decrease in arrow speed during the flight was calculated with Joe Tapley's arrow flight simulator (Tapley 1999), which is widely available on the Internet. The distance between the archer and the target was fixed at 8 m. At this distance, the arrow would lose about 3% of its initial velocity and about 5–6% of its initial kinetic energy. Hence, the arrows struck the target with a kinetic energy of 23.4–27.7 J. Had the discharging distance been greater, both the velocity of the arrow and the kinetic energy at the target would have been even lower. For example, an arrow weighing 28 g would produce the following values 20 m away from the point of discharge: velocity 39.6 m/sec and kinetic energy 22.0 J.

Each arrow was shot only once in order to get a clear estimate of the damage they had caused; a greater number of arrows would have rendered the identification of individual wounds more difficult. The test was carried out in the presence of a veterinary surgeon, who performed a partial autopsy in order to confirm the lethality of the hits. Nevertheless, the experiment did not allow direct shot to shot comparisons, because while some arrows sunk deeply into

Table 1. Arrowheads: mass, velocity and kinetic energy.

m_a (g)	v_0 (m/sec)	E_0 (J)	v_1 (m/sec)	E_1 (J)
28	42.1	24.8	40.9	23.4
33	40.5	27.1	39.4	25.6
37	39.3	28.6	38.3	27.1
39	38.7	29.2	37.7	27.7

m_a = mass of the arrow.
v_0 = initial velocity of the arrow.
E_0 = initial kinetic energy.
v_1 = velocity at the target.
E_1 = kinetic energy at the target.

soft tissue, the advance of others was stopped by bones. In any case, all hits were centred on the vital area, so principally they would have all been lethal.

All bone arrowheads hit the area of the chest cavity, thus penetrating the lungs as well as the whole carcass. Only one of them was slightly damaged, although it could have been reutilized if necessary. Undoubtedly, the elasticity of bone arrowheads prevented them from becoming stuck on the ribs. This was just what happened to the leaf-shaped iron arrowhead, which went through the heart and sank into a rib on the other side. The iron arrowhead with a transverse point hit the spinal column and thus sank less in comparison with the other arrowheads. Of the arrows tipped with quartz, one hit the neck and cut off the cervical artery, while the other hit the cervical vertebra. Both arrowheads came loose from the shaft either at the moment of impact or, at the latest, when the shaft was pulled off from the carcass. One schist-tipped arrowhead of the Sunderøy-type hit the shoulder blade of the reindeer without causing any real damage; the other hit the cervical vertebra, and, hence, penetrated only a little. Both schist arrowheads, however, broke completely at the moment of impact and also came loose from the shaft; neither of them could have been repaired.

In all, the results of this experiment indicate that the aptitude of penetration is fairly similar between quartz, bone and iron arrowheads, as no significant differences were observed. Stone arrowheads, however, are prone to break or to get stuck on ribs, whereas bone arrowheads are more elastic and tend to dodge them. Previous archaeological experiments accomplished with bone arrowheads have led to similar results (see Pokines 1998). With respect to this observation, bone arrowheads seem to have suited better in hunting than arrowheads made of stone. Especially, the arrowheads made of schist appear to have been overly fragile for hunting. On the other hand, stone arrowheads—straight-based arrowheads in particular—were better suited for warfare. Due to the impact, such arrowheads were often fractured and came loose from the shaft. If the result was not an immediate death, the attempts to remove the arrowhead resulted in severe inflammation. This does not mean, however, that straight-based quartz arrowheads could not have been used in hunting and bone arrowheads in warfare. Moreover, due to the limited number of arrows shot during the experiment, the results are merely suggestive. However, on the basis of this experiment the authors suggest that the motive to tip arrowheads with bone instead of stone or iron may have been a matter of practicality rather than of economics.

Discussion

Finally, it is necessary to return to Tacitus' frequently cited passage on the *Fenni*, although it should be clear by now that the task of defining the *Fenni* through the distribution of bone arrowheads is hopeless, as the evidence is very heterogeneous both geographically and chronologically. On the contrary, it is necessary to search for a reason that could explain the insertion of bone arrowheads into his description regarding the *Fenni*. In our opinion, Tacitus seems to have had two motives for doing so; the first one was his potential audience, i.e. the Romans, the other was the sources through which he gained his knowledge of the *Fenni*.

When writing to the Romans about the *Fenni* and other "German" tribes, Tacitus had at least two motives. First, he was predisposed to demonstrate the superiority of the Roman culture by showing the inferior way of life of "the others" and because the *Fenni* were living near the margins of the known world, they were naturally bound to be described as the ultimate savages. Therefore, while the description of the *Fenni* would at first glance seem to be fairly accurate, it may also be interpreted as a collection of clichés through which the Romans defined savagery (de Anna 1988: 59–60; de Anna 1997: 218; Grünthal 1997: 43). Such features were, among others, the absence of proper food, arms, housing, clothing, furniture and transportation.

On the other hand, the description was probably heavily influenced by sources, which Tacitus must have used to construct his description, because the Romans are known to have reached the Baltic Sea in only one case (Plin. *N.H.* 37.45). The most likely source of information for Tacitus was a report written by Pytheas, a Greek geographer and explorer from Massilia (Marseille), who reportedly travelled north along the Atlantic coast around 325 BC (Pekkanen 1984: 227–231; de Anna 1997: 217–218). In addition, Tacitus probably received more up to date information about the conditions in the north through the tribes that were in direct contact with the Romans in northern Germany. For this reason, the description of the *Fenni* is very likely impregnated by prejudices that the neighbouring tribes had towards them (de Anna 1988: 37–38, 52–54; de Anna 1997: 218). Even the ethnonym *fenni* seems to have been invented by the Indo-Europeans in order to be able to discuss these people living by the Baltic Sea (Grünthal 1997: 36–37, 42; see also Carpelan 1998: 84–85). Therefore, little did it matter if bone arrowheads also belonged to the material culture of other "German" tribes, only the strange *Fenni* in their astonishing misery were bound to get credited for it.

Yet, according to Tacitus, there was something adorable in the disgraceful poverty of the *Fenni*, as "they had achieved a consummation very difficult: they have nothing even to ask for" (Tac. *Germ*. 46.5). This passage, however, is not mere admiration, but also an indirect way of criticizing the Roman society

(de Anna 1997: 219), which had abandoned its old virtues for corruption, speculation and debauchery. In this context, a savage tribe living on the margins of the known world and putting their trust in arrows equipped with sharp bone tips was certainly a tale worth telling.

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