WEAPONS AND WARFARE DURING THE BRONZE AGE IN THE AREA OF PRESENT-DAY LATVIA

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Abstract

A characteristic of the Bronze Age in the area of present-day Latvia was a fairly wide range of bronze, stone and bone weapons. The possibility of military clashes, too, is indicated by the building of fortified residential sites, hill-forts. A whole corpus of evidence testifies to the new way of life adopted by the elite of Bronze Age society, where the ideology of warfare also played a certain role.

Key words: Bronze Age, weapons, hill-forts, elite, ideology, Latvia.

Introduction

The earliest age in prehistory where archaeological material clearly shows a complex of evidence connected with warfare is the Bronze Age. From the Mesolithic and the Early and Middle Neolithic, there is no direct artefactual evidence of warfare: there are no finds that can unequivocally be regarded as weapons or military structures. Of course, this does not mean that there was no strife, conflict or armed confrontation among the hunter-fisher communities. (For example, burial 179 at the cemetery of Zvejnieki, with a flint arrowhead that had penetrated a vertebra and four perforations in the pelvis (Zagorskis 2004, p.32), may be a witness of such an encounter.) The first items connected with warfare appear in the the Late Neolithic: these are the polished stone battle-axes or boat axes. Various views have been expressed regarding the significance of these axes. They have been interpreted as weapons, something that Mats Malmer has disputed, considering them unsuitable for real combat (1962, p.661), that they are symbols of a new cult or a different way of life, or that they served to indicate an individual's social status (Loze 1996, p.34). It seems, however, that, regardless of whether the battle-axes of the Late Neolithic were actually used as weapons of war, or had only a symbolic significance, there is an undeniable connection with the idea of combat and warfare.

The Bronze Age brought not only a much wider range of arms and armour, but also saw the construction of strong fortifications. Accordingly, we may ask what kind of role, and how significant a role, was played by weapons, fortifications and warfare in the life of Bronze Age societies of the East Baltic, and what is the situation specifically in the area of present-day Latvia. In seeking answers, we shall first consider the archaeological evidence. This is of two kinds: weaponry and fortifications.

Weaponry

Since bronze is the material that defines the age, we will first consider the weapons made of this material. Of the 165 bronze objects from the Bronze Age found in Latvia, 67 (41%) are weapons. The remaining 98 (59%) include: 70 ornaments, 25 toiletry articles (razors, pincers and awls or tattoo needles), and only three tools. These figures show that bronze was mainly used to make objects that served to accentuate an individual's personal appearance, set the individual apart from the rest, and emphasise their importance.

Forty-seven (70%) of the weapons are axes: flanged and Nortycken-type axes in the Early Bronze Age, and socketed axes in the Late Bronze Age. These weapons have been found in hoards or have been registered as stray finds, and only three come from residential sites. No bronze axes have been found with burials.

Spearheads constitute the second largest group of bronze weapons: 16 have been found (24%). In the Early Bronze Age, they reach as much as 20 centimetres in length, while in the Late Bronze Age shorter forms also appeared, measuring nine to 11 centimetres. It has been suggested that the longer spearheads served for stabbing, while the shorter ones were missile weapons (Harding 2000, pp.281-283). Like the bronze axes, the spearheads, too, have mainly been recovered as stray finds. There are two spearheads from two residential sites, and another two from two burials. Only one spearhead derives from a hoard.

Out of three bronze arrowheads, two have been found on hill-forts, the third being a stray find, the conditions of discovery being unknown.

Only one bronze sword has been found in Latvia. It comes from the Koknese area, near the River Daugava, but the actual find conditions are unknown. The sword is dated to Period VI of the Bronze Age and belongs

to a sword type that is not widely distributed (Atgāzis 2002, pp.352-353).

In the Bronze Age, *stone weapons* were also used. Widespread at this time were shaft-hole axes of simple form and in many cases carelessly made. The work axes are generally between seven to eight and 12 to 13 centimetres long, smaller than the battle-axes. Stone celts (with no shaft-hole) constitute a second group of stone axes, known already in the Neolithic. The Bronze Age examples are smaller, rarely exceeding 10 centimetres in length, and most commonly between six and eight centimetres long. The majority of examples of both axe forms are stray finds, but a significant number have also been found on the hill-forts of the Late Bronze Age and Pre-Roman Iron Age, which indicates that they were widely used during the period of study. Although these axes tend to be included in the category of tools, they could also have been useful in military clashes.

From the area of present-day Latvia, there are about 40 straight-backed stone axes. These measure between eight and 12 centimetres in length, with only a few exceeding this size. In this regard, they resemble simple work axes. However, unlike the latter, the straight-backed axes are characterised by a symmetrical form, careful workmanship and an extension of the shaft-hole. On the basis of these characteristics, the straight-backed axes may be regarded as weapons. The majority of the axes are stray finds, but finds of four fragmentary axes at Daugmale Hill-fort, where habitation began at the end of the second millennium BC, indicates that they are of Bronze Age date (Urtāns 1969, p.89).

A second group of stone axes that may be regarded as weapons are the *double-bladed axes*, totalling about 20. These axes, too, are small, having a length of between nine and 12 centimetres. One such axe has been found in cremation burial 99 of Barrow 2 at the cemetery of Reznas, and is dated to the Late Bronze Age (Šturms 1936, p.80). The other double-bladed axes are stray finds.

There are about 20 stone *mace-heads* with a shaft-hole, and these are of several types: rhombic or hexagonal (nine pieces), as well as oval and round (11 pieces), including one rosette-shaped mace-head. Two finds of round mace-heads from the hill-fort of Ķivutkalns indicate that they were used in the Late Bronze Age.

In the Bronze Age, *bone arrowheads* continued in use as a characteristic artefact form. These may be classed as tanged arrowheads, and only seven bone arrowheads, from Mūkukalns, were socketed (Graudonis 1967, Table XII: 7-12). The prototypes for the majority of bone arrowheads can be found already in the Stone Age, but new forms did appear in the Bronze Age: arrowheads of triangular cross-section and the socketed arrowheads already mentioned. The latter are characteristic of the final phase of the Bronze Age and the beginning of the Pre-Roman Iron Age. Bone arrowheads are generally regarded as hunting weapons, but they could just as well have been used in warfare. The bow and arrow was used in all periods of history, from the Late Palaeolithic right up to and including the Viking Age. Moreover, in military encounters, the bow was practically the only long-distance missile weapon for dispatching enemies.

Indirect support for the idea that bone-tipped arrows had a role as weapons of war can be obtained by comparing the numbers of bone arrowheads and the numbers of wild animal bones at the hill-forts of Ķivutkalns and Brikuļi. At Ķivutkalns, 65 bone arrowheads were found, constituting 2.4% of the total of 2,700 artefacts. At Brikuļi, only four bone arrowheads were recovered, constituting 0.4% of the total of 1,000 artefact finds. Compared with these figures, wild animal bones constituted 6.2% of the total number of bone finds at Ķivutkalns, while the figure for Brikuļi is 13.3%. Thus, the figures show that at Ķivutkalns, six times as many arrowheads have been found, compared with Brikuļi, but only half the number of wild animal bones. If we assume that hunting methods were more or less similar throughout the area of present-day Latvia, then the great number of bone arrowheads at Ķivutkalns may be explained in terms of the use of these weapons not so much in hunting, as in military conflict.

The careful workmanship seen on bone arrowheads might be taken as an indication that at least one section of these arrows were intended as weapons. Forms suggestive of a function as battle weapons include arrowheads of triangular cross-section and socketed arrowheads, which seem to have been modelled after the bronze arrowheads used in the Volga-Kama Basin or in the steppes of southern Russia. One of the three bronze arrows found in Latvia represents this particular type (Graudonis 1967, Table XX: 10). Further to the south-east, finds of such arrowheads are more common: thus, in Belarus, more than 20 have been found (Zalashka 1983, pp.72-77).

As we can see from this overview, there is quite a wide range of weapons, made from different materials. It is not possible to say in all cases whether particular artefact forms were used as weapons (or as symbolic weapons), or whether they served as hunting weapons or tools. Unlike tools, whose form and details were entirely subject to functional considerations, weapons have in all times been given various qualities in addition to their primary function, as seen in the form and design of the details, and the decoration. The bronze

axes and spearheads, not to mention the bronze swords, and likewise a string of stone axes of specific forms, and the stone mace-heads, can unequivocally be categorised as weapons. At the same time, the simple stone axes, like the bone arrowheads, could have served both as weapons of war and as hunting weapons and tools.

Fortifications

In the Bronze Age, a new type of residential site appeared in the area of present-day Latvia, as it did in the whole of the East Baltic: the hill-fort. Defences were built at residential sites already in the Late Neolithic, but these sites were located in places with low relief by lakes and the streams that flowed into them. On the other hand, in the Bronze Age, hill-forts were established at less easily accessible high points in the relief, at the sides of glacial river valleys or in hilly glacial terrain. Life on the hill-forts, compared with the open settlements known from this same period, was in certain respects less convenient. At the hill-forts, the supply of food, water, firewood and possibly also domestic stock to the plateau of the hill-fort, within the fortifications, was a matter of some difficulty. Evidently, the security aspect was of primary importance to the residents of the hill-fort, and other factors were less significant.

The earliest hill-forts were established at the end of the second millennium and the beginning of the first millennium BC, appearing in both western and eastern Latvia. Judging from stray finds, particularly the striated pottery, about 100 hill-forts in the area of present-day Latvia were occupied in the Late Bronze Age and Pre-Roman Iron Age. Among the archaeologically excavated hill-forts, evidence of fortifications from this time has been found at 14, most notably at the completely excavated sites of Doles Ķivutkalns, Ikšķiles Vīnakalns, Kokneses Mūkukalns and Lubānas Brikuļi. The remains of the fortifications give a picture of a very diverse range of defensive structures, from simple wooden fences up to powerful and structurally complex fortifications (Fig. 1; Pl. II.1).

The defensive structures of Late Bronze Age and Pre-Roman Iron Age hill-forts included the following elements and combinations of elements:

1. Timber fences and defensive walls of various construction. At Lielvārdes Dievukalns, the defensive wall consisted of a slightly sloping outer palisade of standing timbers and a double wall of horizontal logs within it, supported by posts (Zariņa 1982, p.52, Fig. 6);
2. Artificially dug ditches. At Brikuļi, the hill-fort plateau within the palisade was enclosed within two ditches, with a width of up to seven metres and a depth of up to 2.4 metres (Vasks 1994, pp.9-10);

Fig. 1. Ķivutkalns: remains of wooden chambers in the middle of the bank (photograph by J. Graudonis).

3. Steepened slopes;
4. Banks of sand, clay and stones. At Ķivutkalns and Vīnakalns, the bank had wooden chambers in the middle (Fig. 1), and the steep outer slope of the bank was covered in certain places (at Ķivutkalns) (Pl. II.1) or all over (at Vīnakalns) with stones laid in clay and covered over with more clay on the outside (Graudonis 1989, p.91).

At more extensively excavated hill-forts, it has been possible to trace the development of the fortifications, from simpler and weaker structures to more complex and powerful defences. Likewise observable is a tendency to extend the area of the plateau, shifting the fortifications outwards to the slopes of the hill.

At Ķivutkalns, J. Graudonis distinguished a total of four phases in the development of the defences. In the earliest phase, the plateau was protected by double and triple fences of posts. In the second phase, a 2.5-metre-wide and 1.2-metre-high bank was thrown up, covered in clay. During the next phase, the bank was increased in height, and wooden chambers were built in its core to improve the stability. In the final phase, the width of the bank reached five to six metres (Graudonis 1989, pp.15-19).

An important element of the defensive system was the entrance to the hill-fort. This was the most vulnerable part of the defences, and so particular attention was given to fortifying it. At Ķivutkalns, Vīnakalns, Dievukalns and Brikuļi, the entrances were corridor-like structures of posts and stones, with a width of 1.2 to two metres. At Brikuļi, the entrance corridor was two metres wide and five to six metres long. At Dievukalns, this kind of corridor of vertical timbers was traced as projecting outwards from the defensive wall by 1.5 metres, and was funnel-shaped: at the outer end the entrance was two metres wide, reduced to 1.2 metres at the place where the corridor passed through the line of the defensive wall. At Vīnakalns, the entrance was indicated by a six-metre-long gap in the stones piled on the slope. At the foot of the slope, the entrance was two metres wide, reduced to 1.2 metres further along. It seems quite clear that this kind of narrowing entrance corridor gave the defenders more opportunity to fight off an attack.

This overview of the defensive structures shows that already in the Bronze Age all the most important techniques of fortification had been mastered, techniques that remained in use in later periods of prehistory.

The causes, character and possibilities of warfare

In order to try to assess the causes, character and possibilities of warfare among Bronze Age societies in the area of present-day Latvia, we may begin by considering how these issues have been approached in Central and northern Europe, where the Bronze Age was much richer and more splendid. For example, Anthony Harding, considering various conditions, mentions the following as possible causes of military conflict: revenge (including blood feud), insult, robbery (particularly the abduction of women), murder and other acts regarded as evil. In the Bronze Age, we cannot speak of war as an institutionalised practice with the possibility of mobilising the necessary human and material resources, since this is a characteristic exclusive to state societies. More characteristic of tribal societies are military raids involving no more than tens of people (Harding 2000, pp.273-274). However, warfare provided the opportunity for individuals to distinguish themselves by their courage and thus gain the recognition and respect of others. From this point of view, warfare became a prestige activity, something that was emphasised by the use of special weapons and armour. In many cases, the bronze weapons and armour were purely decorative, for show: breast armour, greaves, shields and helmets made of bronze sheet, and likewise some of the bronze axes and swords, appeared radiant and fascinating, pointing to the special status of the owners, but were unsuited for actual combat (Kristiansen 1998, pp.116-119, Fig. 59; Neustupny 1998, p.69).

Warfare in the Central and northern European Bronze Age is also described as an essential element in the lifestyle of the elites of decentralised societies with a corresponding military ideology (Kristiansen 1998, p.379). At the same time, warfare could have had a purely ceremonial character, without significant loss of life (Neustupny 1998, p.67). This kind of elite lifestyle and ideology was also reflected in personal attributes, appearance and behaviour, where people presented themselves as warriors (bronze weapons and armour), emphasising social distance by their personal appearance (using bronze toiletry articles), and demonstrated their genetic line and superiority by burying deceased members of the family in specially built tombs, which were sometimes even monumental and visible from afar, namely grave barrows. Artefacts of bronze, especially weapons, were an important way of expressing social prestige, and so the elites in these societies controlled metalworking and maintained the necessary long-distance contacts. The fortified residential sites, centres of districts of various sizes, served to maintain these functions (Kristiansen 1998, p.111).

To what degree could social relationships of this kind have been characteristic of the Bronze Age societies of the East Baltic, including those of the area of present-day Latvia? Although Latvia, like the whole of the East Baltic, was peripheral in relation to the social, economic and ideological developments in Central and northern Europe, several features indicate that certain similarities can be observed in the trajectory of development of the local societies. The significant proportion of weaponry among the bronze objects has already been mentioned, while the toiletry articles point to the increased significance of personal appearance. At the same time, there are no finds in the East Baltic of such supplementary equipment as shields of bronze sheet, cuirasses, helmets and greaves. Bronze swords were likewise very rare. This might indicate that the societies in this region were not as complex and that military ideology had a weaker influence on the lifestyle, for which reason it did not find any reflection in the burial practices. Grave goods have been found very rarely in the several hundreds of Bronze Age burials excavated in Latvia. Against this background, the bronze spearheads found as the only grave goods in two burials may be regarded more as the exception than the norm. Thus, there are no grounds for suggesting that there existed a special social group of warriors in the societies of this region in the period concerned.

In the area of present-day Latvia, certain hill-forts stand out in terms of their powerful defensive structures, which, apart from their purely practical function of defence, possibly also had a definite symbolic significance. Such massive fortifications, as are observed, for example, at Ķivutkalns or Vīnakalns, seem out of proportion to the actual threat of attack in this period and the practical possibilities of breaching such defences. Since a water source has not been identified at any of these hill-forts, they could have been taken after a prolonged siege, blocking the defenders' access to outside water sources. However, such a tactic is unlikely to have been possible, since it would have required a large besieging force and a considerable concentration of resources. This would not have been possible for a Bronze Age group of raiders, numbering some tens of men and oriented towards military raids. Evidently, the building of powerful fortifications also had a purely psychological role: it demonstrated the elite's capacity for engaging resources and organising building work. These hill-forts were also important centres of bronze-working. A fortified residential site of this kind had to give contemporaries the impression of being a monumental, impregnable fortification, and, like the barrows, it may also have had the symbolic meaning of indicating a hold over one's land. The choice of high points in the relief, isolated hills, ridges of glacial till or promontories, that were naturally delimited and thus less easily accessible, as locations for building hill-forts, is usually explained in terms of purely practical defensive considerations. However, such a location had another effect, too, namely that it was visible from a long distance. When one approached the hill-fort, one's gaze was directed upwards, while the gaze of those standing on the defences was directed downwards. This situation may have had a definite socio-psychological significance in the system of social relationships, emphasising the higher social rank of the residents of the hill-fort. Many of the Eneolithic and Bronze Age fortifications of Central Europe have likewise been regarded as being more of symbolic than practical significance (Neustupny 1995, pp.199-201). Without denying the defensive functions of the fortifications of hill-forts, it does seem, nevertheless, that the new military ideology also played a certain role. It seems that many of the bronze axes found in Latvia likewise had a more symbolic importance related to military ideology than practical significance, as indicated either by the small size of these axes, or by the absence of any traces of practical use.

At the same time, the symbolic role of military ideology and warfare in the life of Bronze Age societies in the area of present-day Latvia should not be overemphasised. These competing societies may also have had many mercantile reasons for bloody encounters (the wish to take away domestic stock, agricultural produce, stocks of bronze, etc). At the same time, the existence of many fortified residential sites testifies to a defensive strategy on the part of these societies, using passive means of defence (Vencl 1983, pp.284-286). Such a situation, where "all are armed and all the important centres are fortified", could have created something of a military balance, which nobody really had an interest in disrupting. However, some archaeological evidence of actual armed clashes in this period, be it indirect and open to a variety of interpretations, is impossible to ignore. Thus, evidence of major fires has been found at several hill-forts (Vīnaklns, Brikuļi, Dievukalns, etc). Of course, such fires could have started for a variety of reasons, by lightning, or by the careless use of fire on the part of the residents themselves, but they could also represent the result of deliberate activities by enemies. Evidence of possible military encounters can also come from examination of human skeletal remains in burials. Significant in this regard is the cemetery of Ķivutkalns, from the Early Bronze Age, where a total of 240 inhumed individuals have been excavated. Indications of a violent death were found on five skeletons.

One of these skeletons was missing the skull (burial 10), while another was missing the right foot and lower

leg (burial 135). One individual (burial 23) had two funnel-shaped injuries to the lower jaw and had had two front teeth knocked out. In the opinion of palaeopathologist V. Derums, such an injury could have come about from a blow with a studded mace (Derums 1978, pp.73-74). Damage to the lower jaw and nose was also observed on another burial (82), and in one case the skeleton was missing the right side of the pelvis (burial 159) (Denisova *et al.* 1985, pp.10-31). In all these cases, bone preservation was very good, and there was no indication of disturbance or later damage to the skeletons. Such injuries could, of course, have come about for various reasons, but military conflict and violence are among the possible causes. The Ķivutkalns cemetery does, however, relate to the period before the beginnings of hill-fort construction, when a state of "military balance" had not yet been established. So, it may be that this reflects a different model of social relationships.

Summary

Characteristic of the Bronze Age in the area of present-day Latvia was a fairly wide range of bronze, stone and bone weapons. One section of these would have functioned exclusively as weapons of war (bronze axes, spearheads, swords, certain types of stone axes and mace-heads), while others may have been of universal function (the simplest forms of stone axes, bone arrowheads). Chopping and percussion weapons for close combat include axes, swords and mace-heads. It seems that the longer bronze spearheads may also have been used as stabbing weapons in close combat, and could also have been suitable for use by fighters on horseback. The smaller bronze spearheads could have served as missile weapons, thrown from a distance of tens of paces, while the bow and arrow served as a long-distance missile weapon.

From the Late Bronze Age, the possibility of military clashes is indicated by the building of fortified residential sites, hill-forts. Fortifications of this kind represent defensive action, and possibly indicate the existence of a military balance in Late Bronze Age societies. At the same time, the unusually massive defensive structures of some hill-forts, which had the role of bronze-working centres, also had a purely psychological function in defence, demonstrating the might of this particular community and its elite.

This whole corpus of evidence, bronze weapons, some of which, on account of their small size, can be seen more as symbolic, bronze toiletry articles for maintaining a distinctive personal appearance, and defensive works on a monumental scale, all testify to the new way of life adopted by the elite of Bronze Age society, where the ideology of warfare also played a certain role.

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GINKLAI IR KARYBA DABARTINĖS LATVIJOS TERITORIJOJE BRONZOS AMŽIUJE

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Santrauka

Būdingas dabartinės Latvijos teritorijos bronzos amžiaus bruožas buvo plačiai naudojama didelė bronzinių, akmeninių ir kaulinių ginklų grupė. Viena šių dirbinių grupė buvo naudojama išimtinai kaip ginklai (bronziniai kirviai, ietigaliai, kalavijai, tam tikrų tipų akmeniniai kirviai ir buožės), tuo tarpu kiti panašūs dirbiniai turėjo būti universalios paskirties (paprastesnių formų akmeniniai kirviai, kaulinės strėlės).

Įtvirtintų gyvenamųjų vietų, piliakalnių statyba rodo karinių konfliktų galimybę. Šios rūšies įtvirtinimai atskleidžia išaugusį gynybos (apsaugos) poreikį ir galbūt reiškia karinės jėgos pasiskirstymo tarp bronzos amžiaus bendruomenių balansą. Tuo pačiu metu neįprastai didžiulės kai kurių piliakalnių gynybinės struktūros, kurios buvo bronzos apdirbimo centruose, turėjo ne tik išimtinai psichologinę gynybos funkciją, bet ir demonstravo tam tikrų bendruomenių elito jėgą. Monumentalūs gynybiniai įrenginiai ir bronziniai ginklai, kurių dalis dėl jų mažumo gali būti traktuojami daugiau kaip simboliai, bronziniai tualeto reikmenys, skirti palaikyti individualią asmens išvaizdą, liudija, kad naujas gyvenimo būdas buvo perimtas vietinių bronzos amžiaus bendruomenių elito, kur karo ideologija vaidino tam tikrą vaidmenį.