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Zoomorphic stone maces and axes in the forest zone of north-eastern Europe

Manifestations of interaction between hunter-gatherers and cattle herding groups in the 3rd millennium BC

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Abstract

More than 50 animal-headed stone weapons have been found in the forest zone of north-eastern Europe. These diverse items consist of maces and axes and they represent a variety of animal species, of which brown bear and Eurasian elk are the most common. In this article, we present an up-to-date overview of these finds and discuss their dating and cultural background. We argue that the animal-headed stone weapons were prestige items that were introduced to the northern forest zone by cattle herding groups in the 3rd millennium BC. We interpret the items as manifestations of a new set of pastoralist beliefs, in which masculinity and the bear probably played a central part.

Keywords: animal-head axe, bear symbolism, Corded Ware, male symbolism, zoomorphic art.

5.1 Introduction

An artefact category characteristic to the forest zone of north-eastern Europe is the diverse group of animal-headed stone weapons that has been addressed by numerous early archaeologists in Finland as well as in Russia (e.g. Bryusov 1940; Europaeus 1928; Nordman 1937; Uvarov 1881). The most recent comprehensive studies dealing with these artefacts were published by Christian Carpelan in the 1970s (Carpelan 1974; 1977). Even if the number of finds has not increased dramatically since these publications, we still notice an evident need for an up-to-date overview of this group of artefacts in English. In addition to presenting the zoomorphic stone weapons known today, we will briefly deliberate on the age and cultural affiliation of these artefacts, as there is today reason to believe that the items are generally somewhat older than what has traditionally been assumed. We argue that the emergence of animal-headed stone weapons reflect the dispersal of a new set of beliefs into forested regions of north-eastern Europe in the 3rd millennium BC.

5.2 Description

At an elementary level, animal-headed shafthole weapons made of stone can be separated into two categories: items shaped as animal-heads ('maces') and items that in their other end are sculpted as animal-heads ('axes') (Fig. 5.1). Morphologically, however, these zoomorphic stone weapons represent a large variety of artefact types that can be divided into different groups and subgroups with reference to their overall shape and the form of the shafthole (e.g. Carpelan 1974: 40–58; Zhulnikov 2012: 70–71). Despite evident similarities, all of the items are nevertheless unique in appearance (Fig. 5.1b). There are also noticeable differences in their dimensions; the items range from less than ten to more than 30 centimetres in length.

According to our view, there are a total of 52 stone maces or axes in north-eastern Europe that are likely to represent animal-heads (Tab. 5.1). Of these, 18 items, or 35%, are unmistakable bear-head axes. The bear is thereby the predominant animal species depicted on stone axes, but interestingly hardly ever represented on maces. The next largest group consists of elk-headed items (both maces and axes), represented by 11 finds, or 21%. The rest of the zoomorphic maces and axes (23 items, or 44%) depict other animal species, or are alternatively so fragmented or abstract that it is not possible to ascertain the exact species they are intended to portray. Among the animals represented on axes and maces, however, there seems to be a variety of species including seals, fish, as well as terrestrial and amphibian species.



Figure 5.1. Zoomorphic stone maces and axes from Finland. A – Huittinen (KM 6292). B – From the back: Heinävesi (KM 8946), Antrea (KM 1557), Paltamo (KM 13275). C – Espoo (KM 2611). D – Ruukki (KM 27910). Photos V. Mantere / Finnish Heritage Agency. Not to scale.

	Description	Find site	Inventory number
1	Bear (axe)	Hälsingland (Sweden)	HM 7488
2	Bear (axe)	Ruukki, Pohjois-Pohjanmaa (Finland)	KM 27910
3	Bear (axe)	Paltamo, Kainuu (Finland)	KM 13275
4	Bear (axe)	Heinävesi, Etelä-Savo (Finland)	KM 8946
5	Bear (axe)	Vehkalahti, Kymenlaakso (Finland)	KM 11264
6	Bear (axe)	Halikko, Varsinais-Suomi (Finland)	KM 17610
7	Bear (axe)	Antrea, Karelia (Russia)	KM 1557
8	Bear (axe)	Kurkijoki, Karelia (Russia)	KM 8783
9	Bear (axe)	Tulguba, Karelia (Russia)	GE 1518/1
10	Bear (axe)	Kondopoga, Karelia (Russia)	KGM 544-1
11	Bear (axe)	Beryozovo 29, Karelia (Russia)	KGM 52211
12	Bear (axe)	Tulguba (?), Karelia (Russia)	MAE 21/21
13	Bear (axe)	Shuya, Karelia (Russia)	MAE 21/223
14	Bear (axe)	Voronovo, Leningrad region (Russia)	(plaster replica)
15	Bear (axe)	Volgo 1, Tver' region (Russia)	GIM 102598, A 1842/1
16	Bear (axe)	Vyshnevolotskiy district, Tver' region (Russia)	GE 299/1
17	Bear (axe)	Rostov, Yaroslavl region (Russia)	KP 2062 A-7
18	Bear (axe)	Nyashabozh, Komi Republic (Russia)	GIM 78531, A 976/1
19	Elk (axe)	Alunda, Uppland (Sweden)	SHM 14168
20	Elk (mace)	Östra Ryd, Östergötland (Sweden)	SHM 19162:1
21	Elk (axe)	Kortesjärvi, Etelä-Pohjanmaa (Finland)	KM 8756:5
22	Elk (axe)	Maaninka, Pohjois-Savo (Finland)	KM 2023:105
23	Elk (mace)	Huittinen, Satakunta (Finland)	KM 6292
24	Elk (mace)	Kakskerta, Varsinais-Suomi (Finland)	KM 13439
25	Elk (mace)	Espoo, Uusimaa (Finland)	KM 2611
26	Elk (axe)	Säkkijärvi, Karelia (Russia)	KM 4909
27	Elk (mace)	Petrozavodsk area, Karelia (Russia)	GIM 54746/9286, A 924/1
28	Elk (axe)	Medvezhya Gora, Karelia (Russia)	GE 1518/2
29	Elk (axe)	Padozero, Karelia (Russia)	VGKM 13377
30	Phallic (axe)	Ii, Pohjois-Pohjanmaa (Finland)	KM 1278
31	Phallic (axe)	Nemetskiy Navolok, Karelia (Russia)	KGM 544-4
32	Phallic (axe)	Berezhnoye, Vologda region (Russia)	BIKM-444
33	Human head (axe)	Kiuruvesi, Pohjois-Savo (Finland)	KM 11708
Ambiguous zoomorphic items			
34	Bear/phallic? (axe)	Virkvarn, Småland (Sweden)	SHM 19087:2
35	Bear? (mace)	Stora Vika, Södermanland (Sweden)	SHM 27988
36	Catfish/stylized elk? (mace)	Vingåker, Södermanland (Sweden)	SHM 24489
37	Otter? (axe)	Rovaniemi, Lapland (Finland)	KM 14678
38	Elk? (mace)	Paavola, Pohjois-Pohjanmaa (Finland)	KM 15446
39	Zoomorphic? (mace)	Kalajoki, Pohjois-Pohjanmaa (Finland)	KM 4510
40	Bear? (axe)	Yli-Sipola, Pohjois-Pohjanmaa (Finland)	KM 23740
41	Bear? (axe)	Alahärmä, Etelä-Pohjanmaa (Finland)	KM 7990

Table 5.1. List of zoomorphic, phallic and anthropomorphic stone maces and axes in north-eastern Europe.

	Description	Find site	Inventory number
42	Bear? (axe)	Ylistaro, Etelä-Pohjanmaa (Finland)	KM 13440
43	Amphibian/fish? (mace)	Pihtipudas, Keski-Suomi (Finland)	KM 3801:23
44	Bear? (axe)	Vehmersalmi, Pohjois-Savo (Finland)	Kuopio 2547
45	Bear? (axe)	Pielisjärvi, Pohjois-Karjala (Finland)	KM 12106
46	Bear? (axe)	Pöytyä, Varsinais-Suomi (Finland)	KM 3907:1
47	Elk? (mace)	Neluksa, Karelia (Russia)	KGM 3185
48	Elk? (mace)	Pyhäjärvi, Karelia (Russia)	KM 10528:1
49	Bear? (axe)	Telyatnikovo, Karelia (Russia)	KP 5532
50	Amphibian? (axe)	Sodder, Karelia (Russia)	KGM 7820
51	Zoomorphic? (mace)	Jaakkima, Karelia (Russia)	KM 7443
52	Seal? (axe)	Solomonnoye, Karelia (Russia)	KGM 544-2
53	Seal? (axe)	Salmi, Karelia (Russia)	KM 11211
54	Catfish? (mace?)	Karelia (Russia)	GE 272/129
55	Bear? (axe)	Jalguba, Karelia (Russia)	Item lost
56	Bear? (axe)	Fetinino, Vologda region (Russia)	A-363/1

Table 5.1. List of zoomorphic, phallic and anthropomorphic stone maces and axes in north-eastern Europe.

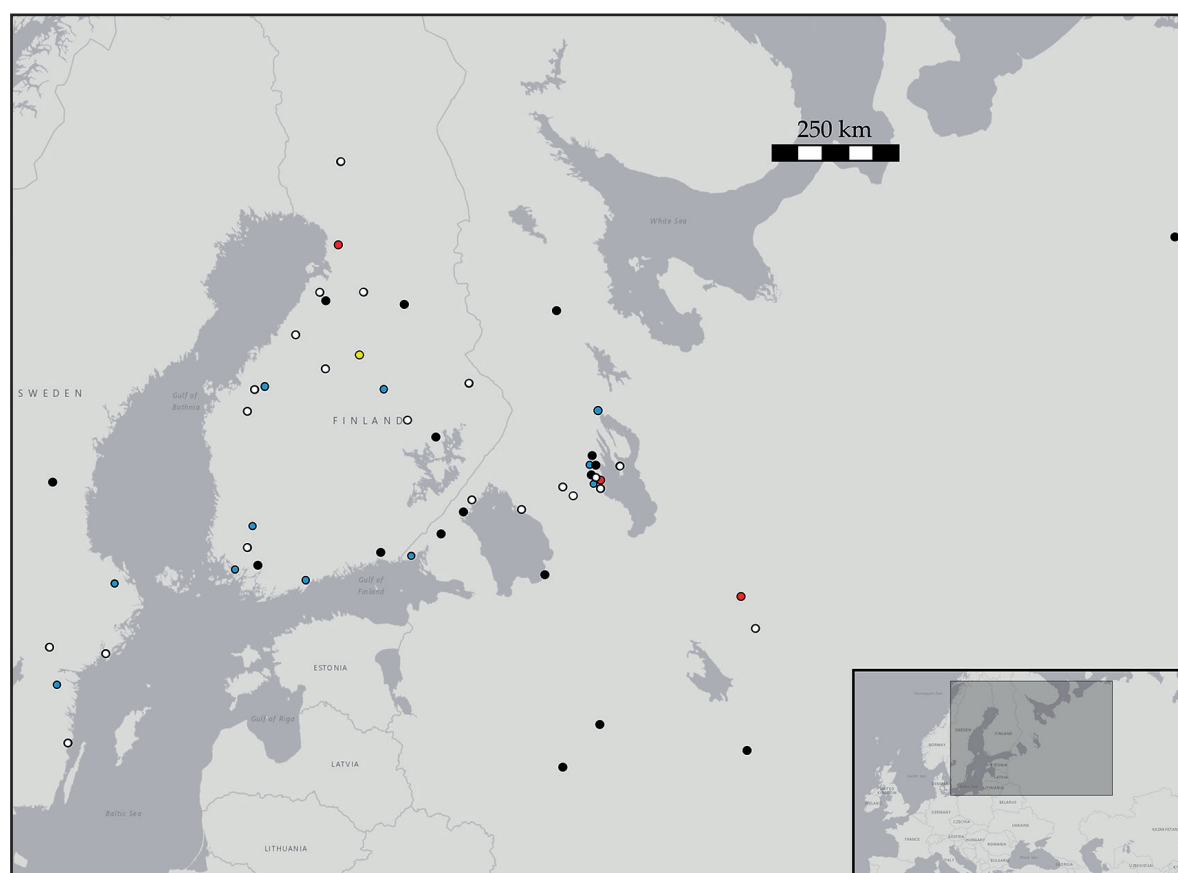


Figure 5.2. Geographical distribution of zoomorphic, phallic and anthropomorphic maces and axes in north-eastern Europe. Black dots: bears; blue dots: elks; red dots: phallic; yellow dot: anthropomorphic; white dots: ambiguous items. Map V. Mantere.

In addition to animal-headed maces and axes, there are also some stone axes that are clearly phallic in shape. Besides, sometimes the alleged animal-heads on stone axes are so abstract that it is not possible to ascertain if they really represent unfinished bear-heads or whether these actually should be understood as phallic representations. This is not necessarily a coincidence, but may indicate that male attributes were in some way paralleled with the characteristics of the bear. Thought-provokingly, however, there is so far only a single known item with an evident anthropomorphic shape; the famous human-head axe from Kiuruvesi in Finland (Meinander 1954: 90).

Like prehistoric stone maces and axes in general, the majority of animal-headed stone weapons have a shafthole. Most of them are circular and made by drilling, but it is noteworthy that the shaftholes show a large variety in shape and there are also several examples of items with unfinished shaftholes. In fact, Shakhnovich (2002: 437) points out that the proportion of stone items with unfinished shaftholes is conspicuously large; more than 25%. In his view, the explanation might be that the 'unfinished' holes were used as friction stones for fire making. Whatever the case may be, several scholars have noted that the stone maces and axes would hardly have been suited for practical use as shafted beating weapons because of their small and unbalanced shaftholes. For this reason, the common opinion has for long been that the zoomorphic maces and axes were ritual or prestige items (e.g. Nordman 1944: 84).

5.3 Geographical distribution and find contexts

In geographical terms, the animal-headed stone maces and axes are widespread in the forest zone of north-eastern Europe (Fig. 5.2). There is a notable concentration of items in the Petrozavodsk region, on the western coast of Lake Onega, which has traditionally been regarded as the production centre of these artefacts (e.g. Nordman 1944: 76). Numerous animal-headed stone maces and axes have also been found in central and southern Finland. Some items are moreover known from mid-east coastal Sweden, and in Russia, animal-headed stone axes have been found from the Pechora, Vyg (Figs. 5.3a, 5.3c), Northern Dvina and Upper Volga River (Fig. 5.3b) basins. No zoomorphic stone items are, on the other hand, known from the Baltic states.

It has for long been pointed out by scholars that some of the animal-headed maces and axes must have been imported items. This is, for instance, the case with the famous elk-head mace from Huittinen that has been made of soapstone (Fig. 5.1a). As this stone type does not naturally occur in southern or central Finland, it has been assumed that the Finnish soapstone axes and maces have been produced in Karelia, where soapstone deposits are common (Ailio 1907: 36–37; Europaeus 1928: 39–40). However, slate, granite, gneiss, quartzite, slate and sandstone have also been utilized for making maces and axes. The variety in the choice of raw materials indicates – together with the fact that many of the items are unfinished – that not all artefacts were imported but some of them were produced locally (Nordman 1944: 77–84). On the other hand, it should also be noted that it was not only intact items that could be imported, but sometimes unfinished items, too, were brought to distant regions. One such item is in all probability the bear-headed axe from Nyashabozh in the Komi Republic (Fig. 5.3a), which stands out in the groups of zoomorphic stone weapons due to its noticeably remote location.

One of the most enigmatic aspects related to the animal-headed stone weapons is that the vast majority of the objects are stray finds. Unlike battle axes, none of the finds stems from a burial, and only a few items have been discovered near settlement sites. This has led scholars to interpret many of the finds as sacrificial deposits (e.g. Carpelan 1974: 34; Europaeus 1922: 111; Zhulnikov and Spiridonov 2003: 47).



A



B



C

Figure 5.3. Bear-headed stone axes from Russia. A – Nyashabozh (GIM 78531, A 976/1). B – Volgo 1 (GIM 102598, A 1842/1). C – Beryozovo 29 (KGM 52211). Photos E. Kashina / State Historical Museum.

5.4 Chronology and cultural context

As virtually all of the shafthole weapons are stray finds, their dating remains obscure. On the basis of their find elevation and stylistic traits, Carpelan suggested that the majority of the finds would stem from the interval of 1750–1500 BC (Carpelan 1974: 77–83). However, because of evident uncertainties related to shoreline dating of stray finds and re-evaluations of archaeological cultures used as frames for dating, it is today justified to assume that the animal-headed stone maces and axes are categorically somewhat earlier. As Zhulnikov (2012: 70) has argued, these can generally be dated to the 3rd millennium BC.

Animal-headed stone items have traditionally been related to battle axes of the Fatyanovo culture. However, as Zhulnikov (2002: 440) has noted, there are only three animal-headed axes known from the Fatyanovo cultural region (e.g. Fig. 5.3b). It is thus probable that the animal-head stone maces and axes are not simply attributable to the Fatyanovo culture but are instead more broadly related to the introduction of the ‘Corded Ware Complex’ (Lavento 2012: 144–147) into the forest zone of north-eastern Europe in the 3rd millennium BC. The emergence of these items coincides with new locally distinct ceramic traditions in the region (Volkova 2019). Before speculating on the reasons that lied behind the making of zoomorphic stone weapons, however, let us briefly address a find that at first glance seems not to fit in the picture in terms of dating – the soapstone mace of Huittinen.

5.4.1 Reconsidering the age of the mace of Huittinen

While the overwhelming majority of the animal-headed stone weapons can be attributed to the 3rd millennium BC, there is one notable exception to the rule. This is the famous elk-head mace from Palojoki in Huittinen (Ailio 1907) – commonly considered as one of the most iconic finds of the Finnish Mesolithic (Fig. 5.1a). To be sure, the early age of this find has been more or less canonized since the radiocarbon dated piece of charcoal obtained from an adjacent hearth provided a date in the interval of 6240–5730 calBC (Jungner & Sonninen 1989: 41). However, as already Luho (1952: 34) paid attention to, the mace was unearthed close to the surface – three years before the discovery and excavation of the Palojoki settlement site. It is thus possible that the mace is actually not culturally associated with the Mesolithic settlement. As Luho stressed, this would not be the first time in Finland when a stray find does not chronologically correspond with the age of the settlement it was found in (Luho 1952: 34). He also noticed that the shafthole of the Huittinen mace has traces of filing that are fully analogous to those seen on Finnish battle axes of type II. Moreover, the mace is made of soapstone, which equally seems to link it to the Corded Ware culture (Luho 1952: 39–40).

The mace of Huittinen has been attributed to the Mesolithic period also on stylistic grounds; namely because of its rounded eyes and ears (Carpelan 1974: 76). As noted above, however, the animal-headed stone axes and maces are noticeably diverse in appearance. In fact, within this artefact category, there are also other examples of items with rounded, abstract and/or unrepresentational features (e.g. Fig. 5.1c). It therefore follows that the early age of the mace of Huittinen is not so clear-cut as it is often articulated as. To be sure, we treat its alleged Mesolithic age with suspicion, especially because this mace would in that case predate other zoomorphic stone axes and maces in north-eastern Europe with as much as three millennia. While this option cannot be ruled out, we find it more probable that the mace of Huittinen is actually contemporaneous with other zoomorphic stone weapons in north-eastern Europe and thus most likely dated to the 3rd millennium BC.

¹ 7120±130 BP (Hel-1726) at 95.4% probability; date calibrated with OxCal v.4.4.2 (Bronk Ramsey 2020), based on IntCal 20 atmospheric curve (Reimer et al. 2020).

5.5 Discussion

Zoomorphic art existed in various forms across north-eastern Europe before 3000 BC. It is thus obvious that the animal-headed stone weapons that appear around this time are understandable as parts of a multimillennial continuum of prehistoric animal art (e.g. Nordman 1944: 87–88). However, the introduction of animal-headed maces and axes marks a significant change in relation to earlier zoomorphic art in the northern forest zone, for the reason that this is the first artefact group that shows a predominance of bear depictions (Kashina & Khramtsova in prep.). Consequently, it is justified to suppose that the bear had a more central role in the beliefs of new cattle herding Corded Ware groups than it had in the minds of hunter-gatherers living in the forest zone. We can only speculate why this was the case, but as Korhonen (1982: 100–102) has suggested, it seems likely that the role of the bear changed drastically by the introduction of animal husbandry. For livestock keepers, the bear had probably begun to constitute a concrete threat, and securing the cattle had become an inevitable task for these groups.

In other words, it is probable that the tradition of making animal-headed stone maces and axes in the northern forest zone was induced namely by Corded Ware cattle herders. For these groups, the bear stood in an important role and was presumably closely associated with masculinity as well. It is reasonable to comprehend the aforementioned bear-head axes with phallic traits as expressions of the close link between the bear and manhood – a well-known theme in later ethnographic sources describing the connotations of this animal among northern populations (e.g. Corma & Ormezzano 2019).

Zhulnikov (2012: 70–72) proposes that the animal-headed stone weapons emerged in an era characterized by violence. He sees the animal-headed maces and axes as being related to the status of their owners as skilled warriors or military leaders. However, even if we likewise recognize the link between powerful male individuals and animal-headed stone weapons – bear-head axes in particular – we do not concur with Zhulnikov's view that the interaction between northern hunter-gatherers and Corded Ware herders was necessarily aggressive in character. Hostile conflicts might of course occasionally have taken place, but in general we find it more conceivable that hunter-gatherers borrowed ideas and cultural traits from the new population in a conversational atmosphere (cf. Lavento 2012: 153). As Shakhnovich (2002: 438) has suggested, it is even possible that a bidirectional change of ideas took place between hunter-gatherers and Corded Ware groups. In any case, among the aspects adopted by northern hunter-gatherers were the shatfhole weapons and the novel role of the bear. Animal husbandry was not yet commonly practiced in the forest zone of north-eastern Europe during the 3rd millennium BC (e.g. Lavento 2012: 146–147), but it seems that features originating in a 'pastoralist' set of beliefs nevertheless quickly gained foothold among hunter-gatherer groups, especially in the Petrozavodsk region in Karelia.

When one examines the dispersal of animal-headed stone weapons on a broad scale, it can be seen that bear-headed axes are the most widespread. These occur over a noticeably larger region than, for instance, the elk-headed items (Fig. 5.2). In addition, all of the Russian artefacts that stem outside Karelia are axes that are either bear-headed or phallic in shape. This seems to give further support to the view that the masculine bear symbolism came from the east. On the other hand, when the 'pastoralist' influence entered towards north-west, this not only gave rise to new kinds of shatfhole artefacts (maces) but also to depictions of other animal species sculpted on the stone weapons. The prevalence of elk depictions in the forest zone is hardly surprising, given that the elk had here been an animal of special significance for several millennia (Mantere in prep.). For those animal-headed items that do not depict elks or bears, however, we can only make speculations. The most likely explanation is nevertheless that these items were produced locally by hunter-gatherers who wanted to make their own variants of the artefacts that initially had been introduced to them as bear-headed and phallic items.

As regards the purpose of animal-headed stone maces and axes, it is likewise reasonable to assume that certain differences existed between different regions. Most likely, however, the initial connotations associated with animal-headed stone weapons were somewhat similar to those ascribed to battle axes, which are known from (mostly male) graves. In other words, these were prestige items owned predominantly by male individuals, and never intended for practical use. Unlike battle axes, however, the animal-headed stone items are never found in burial contexts. On the one hand, this shows that there also were noticeable differences between these two artefact types – even if the animal-headed maces and axes seem likewise to have been taken out of circulation on purpose. On the other hand, it also indicates that even though regional differences existed, there were still some widely shared conceptions related to the function of the animal-headed stone weapons.

5.6 Conclusion

In sum, we have above presented an up-to-date overview of animal-headed stone weapons in north-eastern Europe. We consider these items as manifestations of a new set of beliefs, introduced to the northern forest zone by cattle herding groups in the course of the 3rd millennium BC. Key aspects in this belief system were masculinity and the new role of the bear. The large variation within the category of animal-headed stone maces and axes suggests that there were local peculiarities associated with these items. The common denominator for the artefacts seems nevertheless to have been their role as markers of prestige.

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