

Elk antler mattock-heads from southern and northern Sweden, and the importance of elk in social contexts

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The ecological conditions show synchronous differences between southern and northern Sweden, due to the delayed immigration of flora and fauna in such a long, narrow country. One of the first forest animals to immigrate was the elk. It was also among the first to disappear from southern Sweden. Mattock-heads made from elk antlers have been found in both southern and northern Sweden. In the south, they date to Preboreal times. In Jämtland, in the interior of Norrland, where the character of the bedrock has resulted in low pH values in the surface sediments, four elk antler tools have been found, three of which are mattock-heads. These turn out to span the period from the Mesolithic to the Neolithic, as with the mattock-heads found in Norway. The difference in age between the finds from the south and the north is conspicuous, as is the age variation among those found in Jämtland. The article considers the importance of the elk as a ritual creature and the role of the mattock-heads, which served not only as functional tools but also as actors in people's imagination.

Keywords: Elk mattock-heads, Sweden, Mesolithic, Neolithic, social contexts.

Introduction

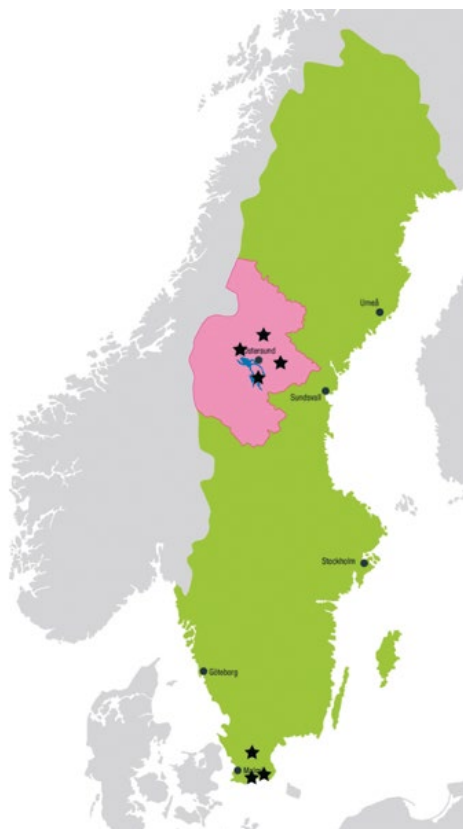
Sweden is a long and narrow country, with a longitudinal length of 1600 km. This means that the country covers several different climate zones, making it difficult or almost impossible to carry out a comparative analysis based on synchronous conditions. In this regard, the study will address environments and beliefs within hunter-gatherer societies. For a more balanced treatment, it is appropriate to include the chronological dimension, with a clear chronological difference due to the climatic conditions relating to the deceleration and disappearance of the land ice. The ecological conditions during the early part of the Mesolithic in southern Sweden can be compared with the conditions in the country's northernmost inland region during the later part of the Mesolithic and a significant part of the time interval corresponding to the southern Scandinavian Neolithic.

In this context, a special form of antler tool from elk will be examined. The tools are shaped from the antlers of *Alces alces*, not to be confused with the antlers of other ungulates.

Mattock-heads from the south

Among the oldest antler tools found in southernmost Sweden after the deglaciation are mattock-heads of elk antler [Fig. 1]. Three findings from Scania have been dated: from Harlösa 9600±65 BP (LuS 6535, 9229–8784 cal BCE), from Mossby 9300±60 BP (LuS 6536, 8711–8327 cal BCE) and from Sjörup 9170±60 BP (LuS 6534, 8551–8281 cal BCE) [Fig. 2], which correspond to the Preboreal¹. In this phase, the elk was one of the most

1 Bengt Salomonsson, "Some Early Mesolithic Artefacts from Scania, Sweden," *Meddelande från Lunds universitets historiska museum* 1961 (1962): 5–26; Kim Aaris-Sørensen, "Diversity and dynamics of the mammalian fauna in Denmark throughout the last glacial–interglacial cycle, 115–0 kyr BP," *Fossil Strata* 57 (2009): 1–59; Lars Larsson, "After the cold: Mammal finds, hunting and cultural affinities during the Preboreal," in *Humans, environment and chronology of the late glacial of the North European Plain. Proceedings of Workshop 14 (Commission XXXII »The Final Palaeolithic of the Great European Plain / Le Paléolithique Final de la Grande Plaine Européenne«)* of the 15th U.I.S.P.P. Congress, Lisbon, September 2006, ed. Martin Street, Nick Barton and Thomas Terberger (Mainz: Römisch-Germanisches Zentralmuseum, 2009), 131–140; Lars Larsson, "In the trail of the elks. Finds from the Preboreal in southern Sweden," in *Forgotten Times and Spaces. New perspectives in paleoanthropological, paleoetnological and archeological studies*, ed. S. Sázlová, M. Novák and A. Mizerova (Brno: Masaryk University Press, 2015), 468–478.



1. Map of Sweden with finds of mattock-heads mentioned in the text. It should be noted that there are a couple of other finds of mattock-heads in the area between the two concentrations.

Švedijos žemėlapis, kuriame pažymėti tekste minimi kirstuvų radiniai. Pažymėtina, kad tarp šių dviejų koncentracijų esančioje teritorijoje yra dar pora kitų tokio tipo radinių

commonly hunted animals. That the elk held a special position not only as a hunted animal but also in people's imagination is evident from some special finds in Danish wetlands.

At the edge of a small wetland at Lundby in Denmark, accumulations of elk skeletons have been found². One of these depositions also

- 2 Ulrich Möhl, "Elsdyr skeletterne fra Skottemark og Favrbo. Sik og brug ved borealtidens jagter," *Aarbøger for Nordisk Oldkyndighed og Historie* 1978 (1980): 5–32; Keld Möller Hansen, Erik Brinch Petersen and Kim Aaris-Sørensen, "Filling the gap: Early Preboreal Maglemose elk deposits at Lundby, Sjælland, Denmark," in *Hunters in a changing world. Environment and Archaeology of the Pleistocene - Holocene Transition (ca. 11 000-9 000 B.C.) in Northern Central Europe. Workshop of the U.I.S.P.P.-Commission XXXII at Greifswald, 2002. Internationale Archäologie, Arbeitsgemeinschaft, Symposium, Tagung, Kongress 5*, ed. Th. Terberger and B. Valentin Eriksen (Rahden/Westf: Verlag Marie Leidorf GmbH, 2004), 75–84; Keld Möller Hansen and Kristoffer Buck Pedersen, "With or Without Bones – Late Palaeolithic Hunters in South Zealand," in *Across the western Baltic*, ed. K. Möller Hansen and K. Buck Pedersen (Odense: Udgivet af Sydsjællands Museum, 2006), 93–110.



2. Elk mattock-heads from Scania, the southernmost part of Sweden. From Mossby (left), Sjörup and Harlösa (right), photo by Lars Larsson

Briedžių ragų kirstuvai iš Skonės, piečiausios Švedijos dalies. Iš Mossby (kairėje), Sjörup ir Harlösa (dešinėje), Lars Larsson nuotrauka

included a mattock-head. Finds from other Danish sites range from almost whole elk carcasses to just a few elk bones³. An elk head in amber, which probably formed part of a representation of the entire animal, has been regarded as belonging to the Late Palaeolithic⁴.

In the southernmost part of Sweden, elk bones have also been found in contexts indicating probable deposition in a ritual context⁵. On the other hand, elk depictions do not appear on the significant number of decorated bone objects from the early part of the Mesolithic, several of which have been made from elk bones⁶. Possibly, the use of elk bones was in itself sufficient to mark the animal's special status. For ecological reasons, due to the spread of coniferous forest and probably also due to hunting, the elk almost completely disappeared in southern Sweden during the Late Mesolithic, as shown by the reduced number of finds from settlements⁷. Even

3 Kristoffer Buck Pedersen and Erik Brinck Petersen, "Bringing home the elk: Preboreal elk depositions from southern Scandinavia," in *Problems in Palaeolithic and Mesolithic research. Arkæologiske studier 12*, ed. M. Sørensen and K. Buck Pedersen (Copenhagen: University of Copenhagen/Museum Southeast Denmark, 2017), 237–255.

4 Peter Vang Petersen, "Amber pendants, bears and elks. Bernsteinanhänger, Bären und Elche," *Die Kunde* 64 (2013): 219–237.

5 Larsson, "In the trail of the elks."

6 Tomasz Plonka, *The Portable Art of Mesolithic Europe* (Wrocław: Wydawnictwo Uniwersytetu Wrocławskiego, 2003).

after the elk had disappeared as a hunted animal, its remembrance was still expressed in the tooth beads worn as part of the costume. Such jewellery was either worn for several generations as an heirloom or obtained through barter with societies further north⁸.

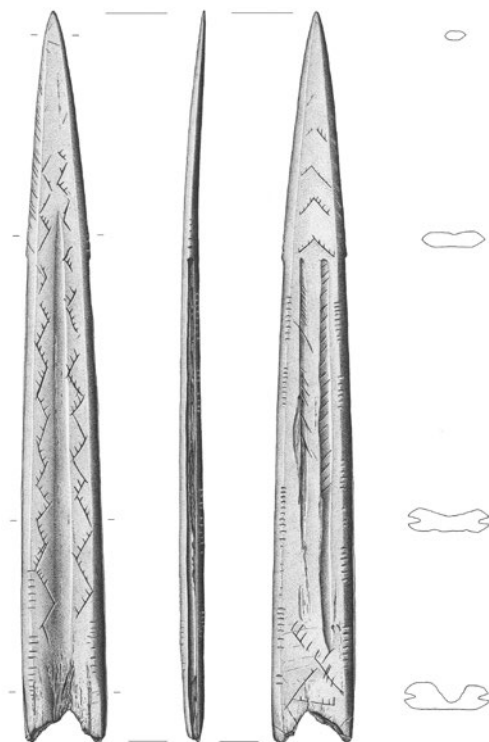
Mattock-heads from the north

Most of northern Sweden has sediments with low pH values⁹. The vegetation, mainly coniferous, has also contributed to the surface conditions, forming podzols with low pH values. As a result, the decomposition of organic matter has been extensive, and it is unusual for organic material to be preserved in occupation layers. The same applies to the majority of lakes and wetlands. Intensive arable farming, necessitating the drainage of wetlands, has not been practiced to any significant extent, and, with good access to firewood, there has not been any great need to utilise peat as a fuel source. These conditions could have contributed to the scarcity of bone and antler finds in northern Sweden.

However, one area stands out from the rest of the region. In parts of Jämtland County, inner central Norrland, layers of Ordovician-age limestone are exposed above the bedrock¹⁰. Through the action of the land ice, this calcareous material has been introduced into the surface soils, thus creating areas with a higher pH value. This has mainly affected the wetlands, where antler and bone objects of prehistoric age have been preserved.

An interesting prehistoric find is a richly decorated fragment of a slotted dagger from Offerdal, dated to 7950±80 BP (Ua-17917, 7057–6647 cal BCE)¹¹ [Fig. 3]. Based on its size, the dagger appears to have been made

- 7 Ronnie Liljegren and Per Lagerås, *Från mammutstäpp till kohage: Djurens historia i Sverige* (Lund: Wallin & Dalholm, 1993).
- 8 Lars Larsson and Theron Douglas Price, "Animal teeth and Mesolithic society," *Open Archaeology* 8, no. 1 (2022): 55–61, <https://doi.org/10.1515/opar-2022-0229>
- 9 Curt Fredén, "Jordarterna," in *Berg och jord. Sveriges Nationalatlas*, eds. Leif Wastenson and C. Fredén (Förlaget Bra Böcker, 1994), 104–119.
- 10 Arne Strömberg, Lars Karis, Ebbre Zachrisson, Tomas Sjöstrand and Roland Skoglund, *Karta över berggrunden i Jämtlands län utom förutvarande Fjällsjö k:n* (Sveriges geologiska undersökning, 1984).
- 11 Lars Larsson, "Regional or interregional? A slotted bone dagger from Offerdal, Jämtland," in *en lång historia... Festskrift till Evert Baudou på 80-årsdagen. Archaeology and environment* 19, ed. Roger Engemark, Thomas B. Larsson and Lillian Rathje (Umeå: Umeå Universitet, 2005), 261–273.



3. Slotted dagger from Offerdal, drawing by Björn Wallebom. Scale 1:2.5

Durklas su grioveliais šonuose iš Offerdal, Björn Wallebom piešinys. Mastelis 1:2.5



4. Mattock-head from Ragunda, Jämtland, photo by Anders Hansson, Jamtli Foundation

Kirstuvas iš Ragunda, Jämtland, Anderso Hanssono, Jamtli fondo, nuotrauka

from an elk limb bone. The dagger is decorated in a style typical of the southern Scandinavian Mesolithic¹². Imprints in the resin along the edge grooves indicate the insertion of edges longer than those represented in the contemporaneous lithic technology. This further supports the idea that the dagger was an import from the south.

The finds in Jämtland also include four tools made of elk antler. The Regional Museum of Jämtland, called *Jamtli*, has four shaft-hole tools, three of which can be described as variously formed mattock-heads. One

¹² Plonka, *The Portable Art*.



5. Mattock-head from Lake Grundsjön, photo by Anders Hansson, Jamtli Foundation

Kirstuvas iš Grundsjön ežero, Anders Hansson, Jamtli fondo, nuotrauka



6. Mattock-head from Billsta, photo by Anders Hansson, Jamtli Foundation

Kirstuvas iš Billsta, Anderso Hanssono, Jamtli fondo, nuotrauka

was found in Ragunda Parish, at a shallow depth in a riverbed that was accidentally drained during channel-digging for timber floating [Fig. 4]. This riverbed was previously known for its rapids. The object, which is 20 cm long, has a shaft hole in the outer part of the antler, while the basal part has a transverse edge.

Another piece was found in Lake Grundsjön in Hammerdal Parish [Fig. 5]. This object, 18 cm long with a transverse edge, has lost a significant part of one side of the outer, shovel-shaped section. However, it appears that the shaft hole was located further down, in the widest part of the antler.

The third was found in the River Billsta, Hackås Parish, between the rocks of the riverbed. This object, with a length of 29 cm, has damage to the outer part of the shovel. It has been provided with a straight edge [Fig. 6]. These three mattock-heads have been ^{14}C -dated [Table 1].

Table 1. ^{14}C dates of elk antler tools
1 lentelė. Briedžio rago dirbinių ^{14}C datos

Singån, Ragunda Parish	LuA-5693	6720 $\pm$ 85 BP	5756-5479 cal BCE
Grundsjön, Hamnerdal Parish	LuA-5692	4995 $\pm$ 90 BP	3972-3637 cal BCE
Billsta, Hackås Parish	LuA-5691	3470 $\pm$ 85 BP	1981-1599 cal BCE
Backen Rödön Parish	LuS-12777	2505 $\pm$ 45 BP	791-476 cal BCE

As can be seen from the table, the age difference between the mattock-heads is considerable – more than 3000 years. The mattock-head from Singån is very similar to those of southernmost Sweden, which belong to a much older phase. Only the oldest belongs to the Mesolithic, while the other two belong to the Early Neolithic and Late Neolithic, respectively, in terms of the chronology applied to more southerly areas.

Another element that can be linked to the presence of elks is that carvings and paintings of this animal are particularly common in the area in question¹³.

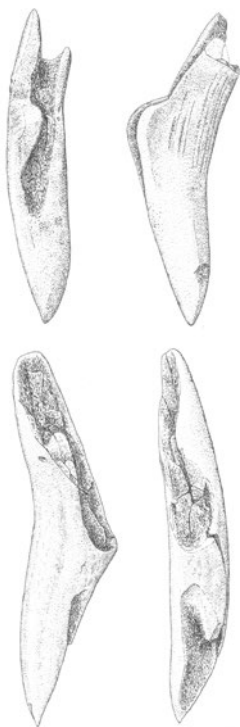
Some mattock-heads of elk have also been found in Norway¹⁴. Pollen analysis and especially ^{14}C dating have been used to establish a chronological grouping. The form of mattock-head exemplified in Jämtland by the find in Singån, with a perforation in the outer part of the shovel, bears considerable resemblance to finds that are perceived to be the oldest in Norway. The objects of Type A are older than those in Jämtland, with dates of 7690 $\pm$ 90 BP (6701–6379 cal BCE, T-2131) and 7300 $\pm$ 100 BP (6386–5896 cal BCE, T-2130)¹⁵.

A mattock-head corresponding to the one from Grundsjön, with a shaft hole further down on the shovel, named Type B, has not been dated radiometrically but is understood to be Neolithic, while the find from Billsta corresponds to Type C, which has been dated to 3000 $\pm$ 80 BP (1426–1011 cal BCE, T-2133) and 2970 $\pm$ 70 BP (1403–1006 cal BCE, T-2132).

13 Per H. Ramqvist, "Hällbilder som utgångspunkt vid tolkning av jägarsamhället," *Arkeologi i Norr* 3 (1990): 31–54, Fig. 2.

14 Egil Mikkelsen and Helge Irgens Høeg, "Hakker av elg- og hjortehorn funnet i Norge," *Universitetets Oldsagssamling Årbog 1975–1976* (1977): 11–28.

15 Hans Ahlgren, *Prehistoric human impact on wild mammalian populations in Scandinavia* (Stockholm: Department of Archaeology and Classical Studies, Stockholm University, 2021); Mikkelsen and Høeg, "Hakker av elg-," Table I.



7. Drawing of pointed tool from Holmen at Lake Tåkern in the southern part of central Sweden, according to Browall 2020. Scale 1:5

Smailiašmenio įrankio iš Holmen ežero prie Tåkern ežero pietinėje centrinės Švedijos dalyje piešinys, pagal Browall 2020. Mastelis 1:5



8. Pointed antler tool from Backen, photo by Anders Hansson, Jämtli Foundation

Smailiašmenio rago įrankis iš Backen, Anderso Hanssono, Jämtli fondo, nuotrauka

In this case, too, there is relatively good agreement, which is not surprising, since Jämtland borders Norway on its western side¹⁶.

Based on its representation at occupation sites and a change in climate, including the 4.2 BP event¹⁷, it seems that the elk population decreased from around 2000 BCE onwards. The hunting of elk also seems to have intensified after this time, given the presence of pitfall traps.

¹⁶ Ramqvist, "Hällbilder som utgångspunkt."

¹⁷ Thomas B. Larsson, Gunhild Rosqvist, Göran Ericsson and Jens Heinerud, "Climate change, moose and humans in northern Sweden 4000 cal. yr BP," *Journal of Northern Studies* 6, no. 1 (2012): 9–30. <https://doi.org/10.36368/jns.v6i1.693>

Another type of antler object

In addition to mattock-heads, another implement form is encountered, namely, a pointed tool made from an elk antler point. This consists of a section of an antler bar or tine that has a cutout for a handle at the opposite end [Fig. 7]. Several such pieces have been found next to Lake Tåkern in the southern part of central Sweden¹⁸. Two have been dated, giving ages of 6480 ± 65 BP (5558–5316 cal BCE, UA-11869) and 6005 ± 100 BP (5209–4694 cal BCE, UA-13135)¹⁹. There are finds of the same tool type from the settlement of Strandvägen by Lake Vättern in the southern part of central Sweden, which dates from the sixth millennium BCE²⁰. A similar antler tool, however, with a pointed end instead of a cutting edge, has been found at Backen, Rödö Parish, in Jämtland, in the same region as the above-mentioned mattock-heads²¹ [Fig. 8]. In order to determine the age of the find in relation to more southerly finds, it has been dated and has given a much younger value, 791–476 cal BCE, which corresponds to the later part of the Bronze Age. This implies that this form of antler tool had a significantly longer period of use than any of the other forms made from elk antler.

Mattock-heads of ritual importance?

All of the mentioned mattock-heads have been found in wetlands, which is understandable, as it is in lakes and rivers that the preservation conditions have been favourable for organic matter. But is it certain that this is the only reason why they are found in this environment? Doubts arise because, in both areas, the elk had a special position in the social world. As previously stated, in southern Scandinavia, there are wetland finds of both large and small accumulations of bones from elk carcasses. One of these intentional depositions includes a mattock-head of elk antler²², which

18 Hans Browall, "Mesolitiska mellanhavanden i västra Östergötland," in *Glyfer och arkeologiska rum – en vänbok till Jarl Nordbladh. Gotarc Series A vol. 3*, eds. Anders Gustafsson and Håkan Karlsson (Göteborg: Göteborg University, 1999).

19 Browall, "Mesolitiska mellanhavanden i västra."

20 Personal information from archaeologist Fredrik Molin, Arkeologerna Linköping.

21 Oscar Montelius, *Minnen från vår forntid* (Stockholm: P.A. Norstedt & Söners Förlag, 1917), Fig. 67.

22 Møller Hansen, Brinch Petersen and Aaris-Sørensen, "Filling the gap."; Møller Hansen and Buck Pedersen, "With or Without Bones."

supports the view that this type of object may have had not only a practical but also a ritual function.

The elk was one of the most commonly hunted animals in Norrland during a significant part of the prehistoric period²³. This is evident not least from the rock images, painted and carved, as well as depictions on portable objects that occur in northern Sweden²⁴. These are regarded as having been created by hunter-gatherer societies and may be of Mesolithic age or slightly younger. The elk can be said to have had a special place in the social world²⁵. Although a terrestrial animal, it seeks out water to graze on various floating and submerged plants. Because of this, the animal may have been perceived as a mediator between an upper, or actual, world and a lower, or mythological, world. It is interesting that there is no ornamentation on these antler objects.

- 23 Jan Ekman and Elisabeth Iregren, *Archaeo-zoological investigations in northern Sweden. Early Norrland 8* (Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien, 1984); Larsson, Rosqvist, Ericsson and Heinerud, "Climate change, moose."
- 24 Sverker Janson, "Jägarfolkets konst," in *Jämtlands och Härjedalens historia*, eds. Sverker Janson, Margareta Björnstad and Harald Hvarfner (Arkeologisk Inledning, 1962), 58–67; Ville N. Mantere, *The relationship between humans and elks (Alces alces) in Northern Europe c. 12 000–1200 calBC* (Turku: University of Turku, 2023).
- 25 Larsson, "After the cold."; Aleksandr M. Zhulnikov and Ekaterina A. Kashina, "'Staffs with elk heads' in the culture of the ancient population of the Eastern Urals, Northern and Eastern Europe," *Archaeology Ethnology & Anthropology of Eurasia* 38, no. 2 (2010): 71–78, <https://doi.org/10.1016/j.aee.2010.08.010>; Jacek Kabaciński, Sönke Hartz and Thomas Terberger, "Elks in the early Stone Age art of the northern Lowlands," *Præhistorische Zeitschrift* 86, no. 2 (2011): 151–164, <https://doi.org/10.1515/pz.2011.010>; Stephan Veil, Klaus Breest, Pieter M. Grootes, Marie-Josée Nadeau and Matthias Hüls, "A 14 000-year-old amber elk and the origins of northern European art," *Antiquity* 86, no. 333 (2012): 660–673, <https://doi.org/10.1017/S0003598X00047839>; Marius Iršėnas, Tomas Rimkus, Adomas Butrimas and Gvidas Slah, "The elks of Šventoji: taking another closer look," *Archaeologia Baltica* 25 (2018): 125–139, <https://doi.org/10.15181/ab.v25i0.1834>; Bettina Schulz Paulsson, Christian Isendahl and Fredrik Frykman Markuth, "Elk-heads at sea: Maritime hunters and long-distance boat journeys in Late Stone Age Fennoscandia," *Oxford Journal of Archaeology* 38, no. 4 (2019): 398–419, <https://doi.org/10.1111/ojoa.12180>; Ville N. Mantere and Ekaterina A. Kashina, "Elk-head staffs in prehistoric north-eastern Europe and north-western Russia – signs of power and prestige?," *Oxford Journal of Archaeology* 39, no. 1 (2020): 2–18, <https://doi.org/10.1111/ojoa.12185>; Robert J. Losey, Vladimir I. Bazaliiskii and Tatiana Nomokonova, "An integrative examination of elk imagery in Middle Holocene Cis-Baikal, Siberia," *Journal of Anthropological Archaeology* 63 (2021): 10131, <https://doi.org/10.1016/j.jaa.2021.101311>

The importance of tools made from elk antler is demonstrated by a special variant of the mattock-head that was found in a late Boreal cultural layer in Skåne. Unlike the previously mentioned pieces, this object has been provided with ornamentation in the form of spirals and curving-edge indentation lines²⁶. The design suggests that it was conveyed to Skåne from southern Norway, a distance of at least 600 kilometres. In adjacent areas of Scandinavia, there are carvings of people holding poles with elk heads²⁷.

An interesting observation is that almost all depictions of elk show them without antlers²⁸. Only the bulls have antlers, and they shed them during the later part of the winter. The depictions should therefore show either elk cows or bulls as they appear in late winter and spring. A number of interpretations have been put forward²⁹. Some carvings show the so-called chin beard, which is most strongly marked on bulls. The antlers constitute a clear marker of power in the elk population, and a hunter from a generations-long hunting tradition would be well aware of this. In addition, the antlers were used as raw material for mattock-heads, among other things.

The absence of antlers in carvings may be linked to specific beliefs regarding how an elk should be represented. This absence might relate to a prohibition on their depiction due to particular beliefs. Could such beliefs be connected to the antler axes found in wetlands?

It should be emphasised that mattock-heads are made of antler. Hardness was required of the raw material, which could hardly have developed until the velvet skin around the crown of the antler had fallen away. These objects may not necessarily relate to hunting at all; rather, they may have

26 Lars Larsson, "Spirals, bands and deer. Hafted and richly decorated antler objects from Scania, southern Sweden," in *Mesolithic Art – Abstraction, Dekoration, Messages. International Conference Halle (Saale), Germany, 19th–21st September 2019. Tagungen des Landesmuseums für Vorgeschichte Halle Band 26*, ed. J.M. Grünberg, B. Gramsch, E. Brinch Petersen, T. Plonka and H. Meller (Halle (Saale): Landesmuseum für Denkmahlpflege und Archäologie Sachsen-Anhalt, 2023), 191–204.

27 Peter Skoglund, Michael Ranta, Tomas Persson, Anna C. Redei and Jan M. Gjerde, "A narrative turn: Human agency in rock carvings at Nämforsen, Northern Sweden," *Oxford Journal in Archaeology* 42, no. 4 (2023): 301–321, <https://doi.org/10.1111/ojoa.12282>

28 Mantere, *The relationship between*.

29 Gunnar Hallström, *Monumental art of northern Sweden from the Stone Age: Nämforsen and other localities* (Stockholm: Almqvist & Wiksell 1960); Ingrid Fuglestad, *Rock art and the wild mind: visual images in the Mesolithic Northern Europe* (London: Routledge, 2019); Mantere, *The relationship between*.

been collected. Antlers are relatively rare, as they are quickly consumed by small rodents. It was not just any antler that could be transformed into a mattock-head. The raw material consisted of a strong antler shovel and a substantial beam from a fertile bull. Only the largest bulls bore such antlers and also attracted the largest number of elk cows. Thus, while mattock-heads were practical tools, they also became markers of power and fertility. As previously stated, mattock-heads appear in southern Scandinavia in contexts that suggest ritual significance. When knowledge about a tool is shared, it encompasses both how the tool is made and used, as well as the narratives associated with it. The end of the use of a tool might be linked to certain actions. The preference for depositing mattock-heads in wetlands could be one such belief.

The importance of elk today

It is possible to draw a parallel between prehistoric interest in elk and the present day. Today, the elk holds a special status in parts of Norrland. During elk hunting season, many hunters, both men and women, leave their regular jobs to join various hunting teams. Shops and businesses close. Although framed as an opportunity to fill freezers with meat, participation in the hunt is also an important social event. There is also strong competition over who has shot the most elks, who has the best hunting dog, and who has brought down the elk with the most magnificent antlers. Even today, elk influence non-material aspects of society.

The author experienced this firsthand during a presentation of the aforementioned richly decorated dagger fragment from Offerdal at a meeting near the find site [Fig. 2]. The locals perceived the find as the tip of a spear for elk hunting. When this interpretation was challenged, the mood became notably tense. An archaeologist from the south had arrived and offered a different opinion, one that contradicted the interpretation held by the local community. The claim was not well received. One participant had earned extra income by crafting hunting spears as decorative copies of the find, while a silversmith had made tie holders in silver, replicating the lace section.³⁰

Summary

The mattock-head was an important tool in both southern and northern Sweden, with a significant difference in dating due to a temporal shift in ecological conditions. However, the basic form remained the same. The exact function is unknown, but they may have been used in multiple ways. Made from elk antlers, a raw material not easily obtained, these tools likely had an impact on society's imagination as well.

Acknowledgements

The author wishes to express his gratitude to Curator Anders Hansson (Jamtli) for sampling the antler tools, to Alan Crozier for proofreading and to the two reviewers for their valuable comments.

Received — 2024 08 26

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Santrauka

Briedžio ragų kirstuvai iš Pietų ir Šiaurės Švedijos, ir briedžio svarba socialiniame kontekste

Lars Larsson

Reikšminiai žodžiai: briedžio rago kirstuvai, Švedija, mezolitas, neolitas, socialinis kontekstas.

Dėl vėlyvos floros ir faunos migracijos mezolite ir neolite, tokioje ilgoje ir siauroje šalyje kaip Švedija, ekologinės sąlygos pietų ir šiaurės Švedijoje sinchroniškai skiriasi. Vienas iš pirmųjų čia pasirodžiusių miško gyvūnų buvo briedis. Jis taip pat buvo vienas pirmųjų, išnykusių iš pietų Švedijos. Iš briedžio ragų pagamintų kirstuvų rasta ir pietų, ir šiaurės Švedijoje. Pietuose jie datuojami preborealio laikotarpiu. Jämtlande, Norrlando žemumos gilumoje, kur dėl uolienų pobūdžio paviršinių nuosėdų pH vertė yra žema, rasti keturi briedžio ragų dirbiniai, iš kurių trys yra kirstuvai. Paaiškėjo, kad jie apima laikotarpį nuo mezolito iki neolito, kaip ir Norvegijoje rastos jų analogijos. Į akis krinta chronologiniai skirtumai tarp radinių pietų ir šiaurės Švedijoje, taip pat amžiaus skirtumai tarp Jämtlande rastų radinių. Straipsnyje svarstoma briedžio, kaip ritualinės būtybės, svarba ir rago kirstuvų, kurie tarnavo ne tik kaip funkciniai įrankiai, bet ir kaip žmonių vaizduotės vaisiai, vaidmuo.