

THE ELKS OF ŠVENTOJI: TAKING ANOTHER CLOSER LOOK

MARIUS IRŠĖNAS, TOMAS RIMKUS,
ADOMAS BUTRIMAS, GVIDAS SLAH

Abstract

The elk staff is a characteristic Stone Age artefact from the Baltic region. The most elegant specimens have been found in the Olenij Ostrov burial site and various Stone Age sites in Šventoji. In 2016, the use-wear of artefacts found in the Stone Age sites of Šventoji was studied microscopically under a magnification factor of 690. The research effort also resulted in the successful dating of one of the staves found at the third archaeological site of Šventoji. The article presents the results and findings of the study, supplementing what is already known about the artefacts.

Key words: Šventoji, Stone Age, elk staves, use-wear analysis, radiocarbon dating.

DOI: <http://dx.doi.org/10.15181/ab.v25i0.1834>

Introduction

The Stone Age sites of Šventoji were discovered in 1966 in western Lithuania, between the resorts of Palanga and Šventoji (closer to the latter). Archaeologists began studying the sites the very same year. The area was a wetland formed by the no-longer-existing Baltic Sea Lagoon, and the Stone Age sites in which the staves were found lay along its shore (Fig. 1) (Kunskas 2005). The lagoon itself took shape no earlier than midway through the Atlantic Period, at the peak of the Littorina Transgression (Piličiauskas et al. 2012). This explains why no sites dating before the fifth millennium BC have been discovered here so far.

Two large staves, 44 centimetres and 42 centimetres long, were discovered at the third archaeological site of Šventoji in 1972, while one smaller staff, measuring 14.8 centimetres, was found during excavations at Šventoji site 4B in 1989 (Rimantienė 2005, pp. 267, 329).

Much has been written about the elk head staves. The staves themselves and the circumstances of their discovery were described in detail by the archaeologists who found them, Nina N. Gurina (1956) and Rimutė Rimantienė (1979). All known images of elks in the Baltic region are most comprehensively summarised by Christian Carpelan (1974, 1975) in two studies published in Finnish and Swedish. Elk images were also analysed by Ilze Loze (1970), Božena Wyszomirska (1984), Adomas Butrimas (2001), Marius Iršėnas (2000) and Ekaterina Kashina (2011). In addition to presenting various facts about the appearance of the elk staves and the circumstances of their discovery, they also offer interpretations as to their meaning and

function. A good part of the material that allowed researchers to formulate their interpretations was provided by the context of the finds at Olenij Ostrov. The staves were laid alongside male skeletons in collective graves. This context provided researchers with clues about the status, sex and age associated with the staves, as well as their relationship to other artefacts found at the burial sites (Iršėnas 2000, p. 99; Iršėnas 2006, pp. 303–306; 2010, pp. 176–177).

The context surrounding the staves at the Šventoji sites does not lend itself to interpretation so easily. In her study of the Stone Age sites of Šventoji, the archaeologist Rimutė Rimantienė writes that the staves were in relatively deep (80, 140 and 100 centimetres) layers of lake sediment (*gyttja*). She goes on to conclude that the staves were either washed over by later floods, or thrown into the water on purpose (Rimantienė 2005, pp. 340–342). We can only guess what actually happened: was this an act of sacrifice, simply a lost belonging, something that was thrown out, or otherwise lost?

As we did not see any further possibilities for extracting and interpreting information from the actual site of discovery, we chose to approach the artefacts with a use-wear analysis. In 2016, we examined the three staves from Šventoji through a microscope, and took a sample from one of the staves for radiocarbon dating. Our findings allowed us to add to Rimutė Rimantienė's admirable description with new measurements and images, as well as new insights into how the staves were used and their place in the chronological history of the Baltic region. The use-wear analysis was conducted using an Olympus SZX16 stereoscopic microscope hooked up to a DP72 camera that records images of the

I

STONE AGE
IN NORTHERN
EUROPE:
CHANGES IN
LANDSCAPE,
TECHNOLOGIES
AND BELIEFS

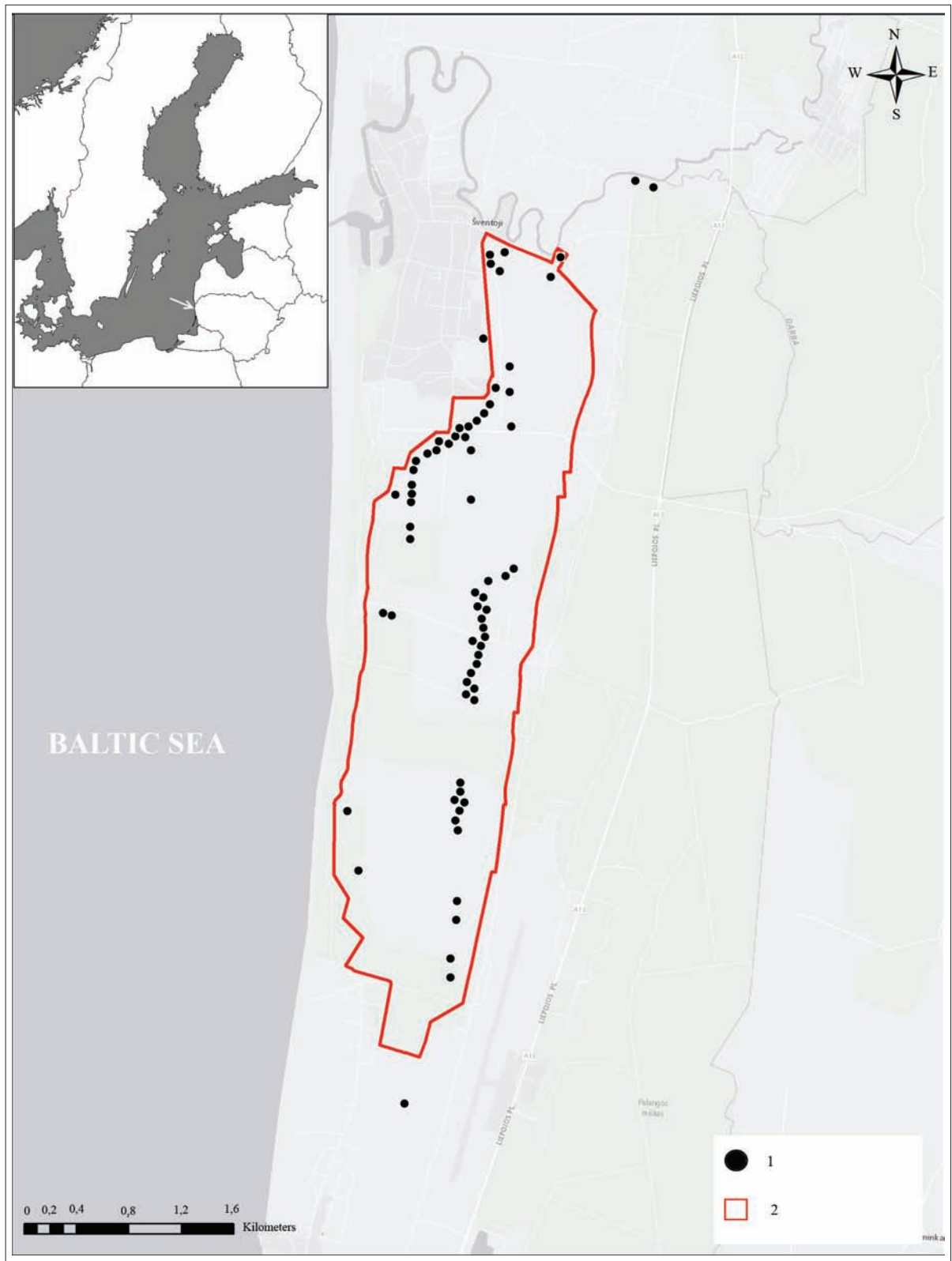


Fig. 1. A map of the Stone Age sites at Šventoji where the elk staffs were found: 1 the studied sites; 2 the boundary of the Šventoji Neolithic settlement (compiled by Tomas Rimkus).



Fig. 2. The staff from the Šventoji 3 site, 44 centimetres long, and a detail. Antler, LNM EM 2132: 397 (photograph by Marius Iršėnas).

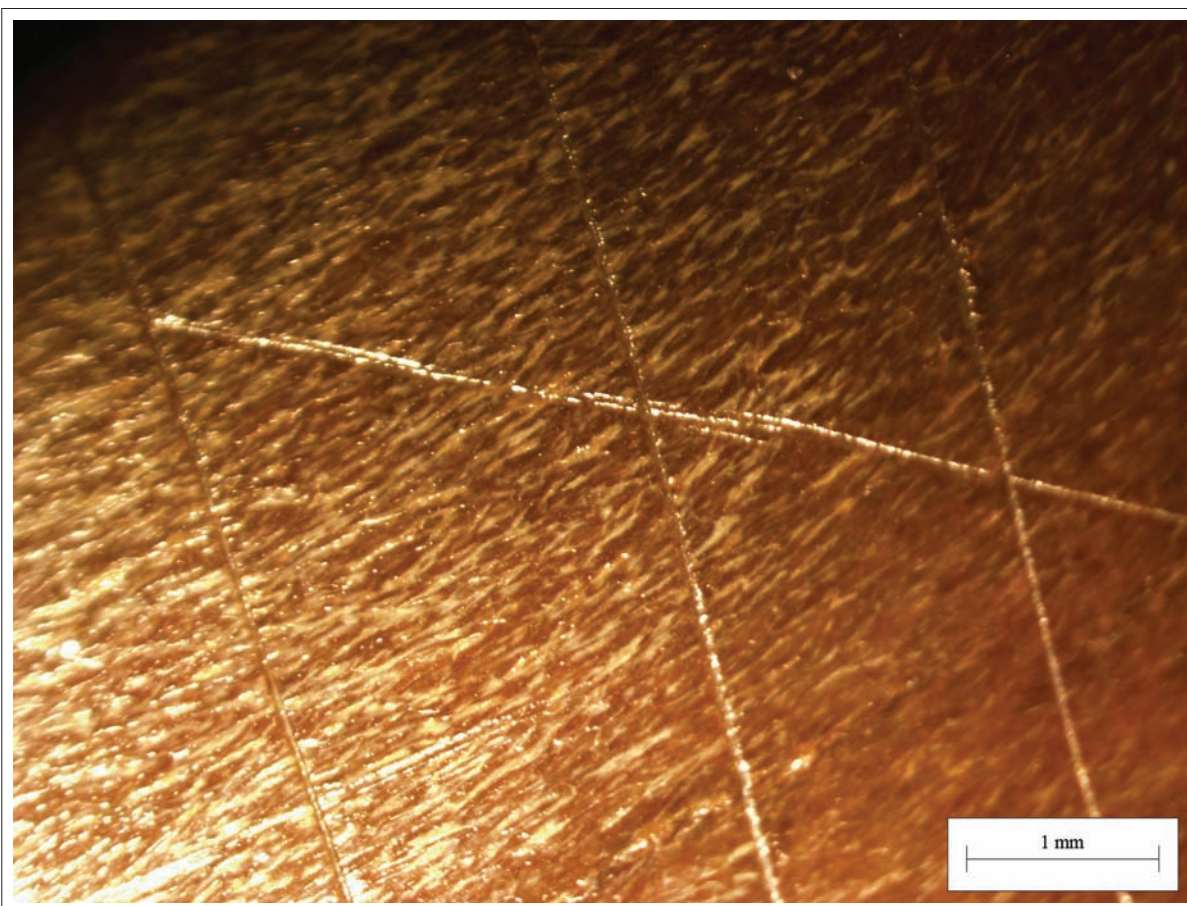


Fig. 3. Thin ornamental scratches. The staff from the Šventoji 3 site. Antler (photograph by Gvidas Slah).

I

STONE AGE
IN NORTHERN
EUROPE:
CHANGES IN
LANDSCAPE,
TECHNOLOGIES
AND BELIEFS



Fig. 4. Tooth incisions. The staff from the Šventoji 3 site. Antler (photograph by M. Iršėnas and Gvidas Slah).

object and represents them as illustrations. The images were processed with Image-Pro Express 6.3 software. Technological traces and other important traces on the staffs were at their greatest visibility when magnified by a factor of 7 to 63.

Use-wear analysis

The large 44-centimetre and 42-centimetre staffs from the Šventoji 3 site, and the smaller 14.8-centimetre staff from site 4B, were examined microscopically.

Before we launch into a description of our findings for the 44-centimetre staff from Šventoji 3, it is worth citing the great description presented in Rimutė Rimantienė's monograph 'The Narva Sites of Šventoji' (Šventoji. Narvos kultūros gyvenvietės):

'The cross-section of the lower part of the 44-centimetre staff is of a quadrangular shape, while a slightly rounder and thicker part leads into the carved elk head. The two ears are carved out of the brow tines, and they are separated by a small groove. The head, from the tips of the ears to the nostrils, measures 14 centimetres in length. The carving was made by someone who had a very good knowledge of the animal's anatomy, and

emphasised its most characteristic features, as well as adding various details to make the figure come alive. These include, for example, the slight but characterful bump on the animal's forehead, almost at the level of its eyes, that gives the carving life. The eyes have an almond-shaped contour, and are followed by a slight slope down the entire long hump up to the nose. The muzzle is almost quadrangular, and orifices are carved out for the nostrils. Above the pronounced and protruding lower lip so characteristic of the elk are the teeth, carved out with a gap in place of the canine teeth, a common feature of herbivores. The underside of the jaw depicts a dewlap and a beard, represented by two rows of herringbone-pattern scratches that stretch from the underjaw to the ears. Just below the neck is a carving of a small rounded growth. The surface of the entire head is very elegantly polished, while the nose and ears are decorated with thin criss-cross scratches. The lower part of the ritual staff is of a quadrangular cross-section and narrows towards the bottom, where a cylindrical hole is carved out' (Rimantienė 1979, p. 106).

A microscopic examination of the staff revealed traces of stone polishing at the edges: the scratches were made on an already polished surface (Fig. 3). A flint

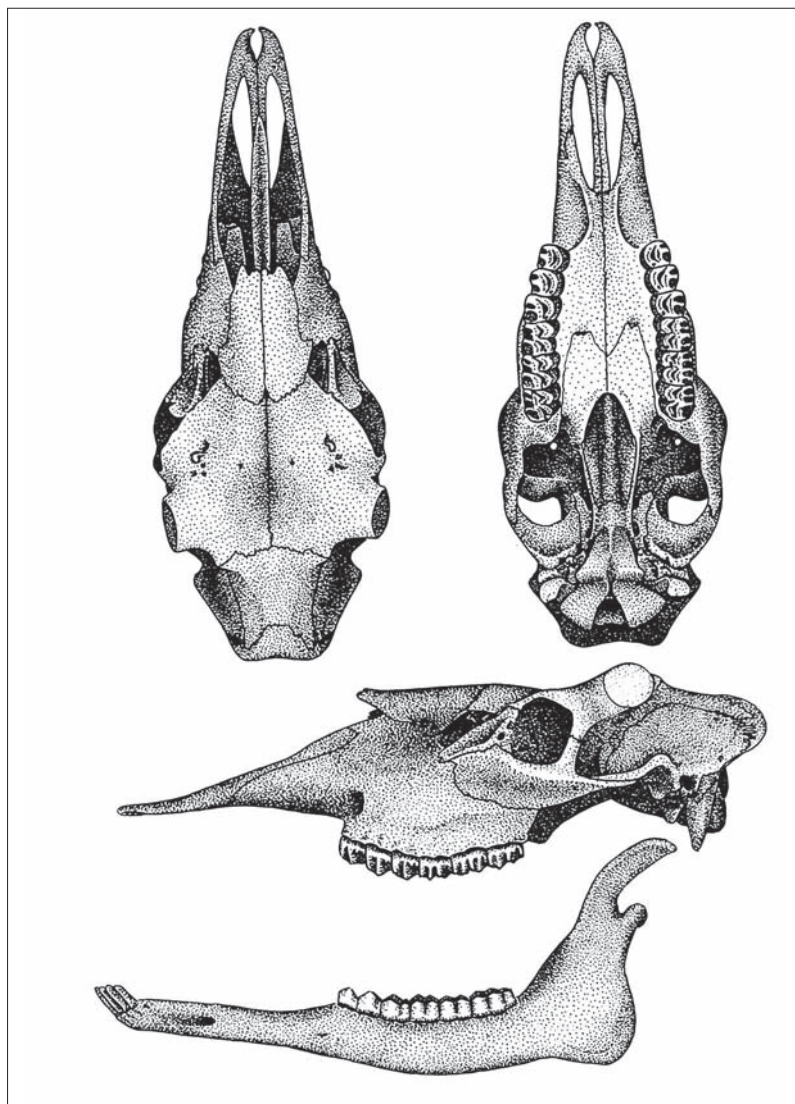


Fig. 5. An elk skull (from *Lietuvos fauna* 1988, Fig. 253).

knife was used to create the thin ornamental, sometimes double, scratches.

The tooth and lip lines are carved deeper into the bone. The line was made by using a 0.4-millimetre cutter, while the nine lines that mark the eight teeth were made with at least three incisions (Fig. 4). The depiction of the teeth illustrates a good knowledge of the elk's anatomy: the teeth are only carved out of the lower lip because the elk does not have teeth at the front of its upper jaw (Fig. 5) (*Lietuvos fauna* 1988, p. 254).

Only half as many teeth are carved out, 12 across both sides, while there should be 24, but the gap between the front teeth and the molars is depicted accurately, and both the teeth of the lower and upper jaws are shown (Fig. 4). It is obvious that this knowledge of an elk's teeth could only have been gathered by studying the skull of a hunted specimen, because the observation of a live elk would not have revealed its dental anatomy.

To paraphrase the art historian Ernst Gombrich (1960), the staff depicts not just what its creator saw, but what the creator knew. At present, it is the only known depiction of teeth in the entire collection of elk images of the Baltic region.

The cylindrical growth on the underside of the jaw depicts the dewlap, and was carved out with a knife. The decoration that stretches across the underjaw was carved out with a cutter (0.7 millimetres) (Fig. 6) and later polished. The much wider decorative incisions on the ear were also made with a cutter, but the surface was later polished with scouring rush (*Equisetum hyemale* L.). The almond-shaped eyes were carved out using a flint knife (0.25 to 0.41 millimetres) (Fig. 7). A shallow linear knife incision marks one iris, which is an accurate representation of a live elk's iris.

The elk head is separated from the rest of the staff with a tooth-marked relief line that stretches from the ear



Fig. 6. The decoration on the underjaw. The staff from the Šventoji 3 site. Antler (photograph by Stasė Butrimienė).



Fig. 7. A carved eye and iris. The staff from the Šventoji 3 site. The eye of the elk and its iris.

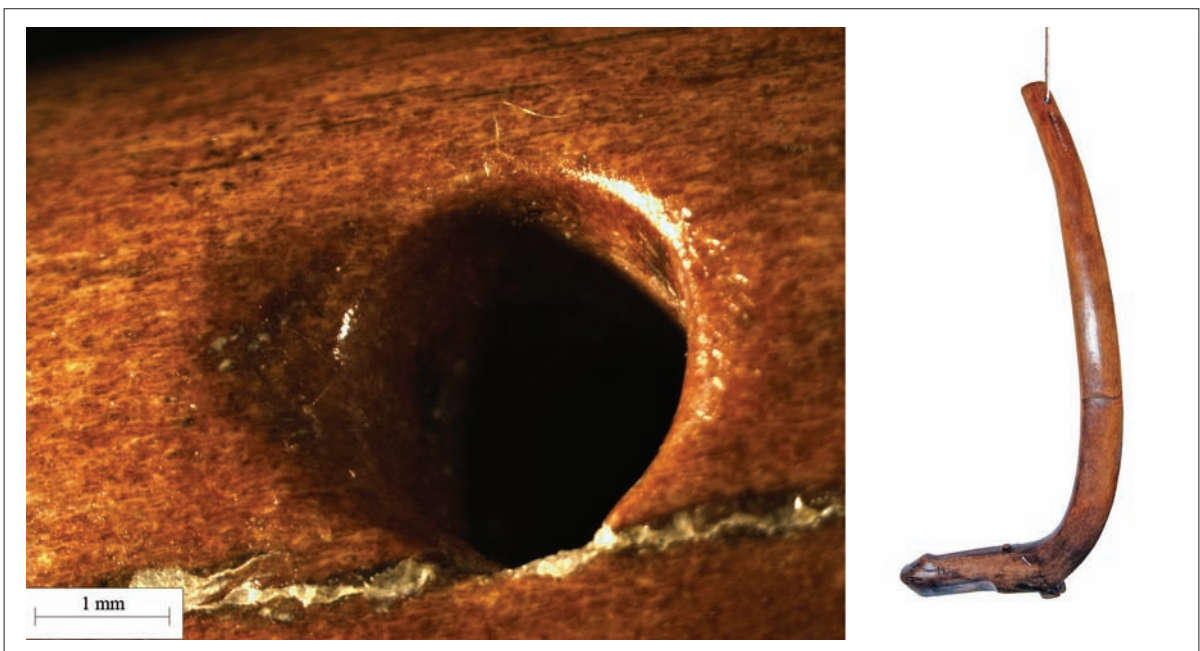


Fig. 8. The hole at the bottom of the staff from the Šventoji 3 site and the use-wear analysis indicate the position the staff was carried in (photograph by Gvidas Slah and Marius Iršėnas).



Fig. 9. The staff from the Šventoji 3 site, 42 centimetres long. Antler, LNM EM 2132: 396 (photograph by Marius Iršėnas).

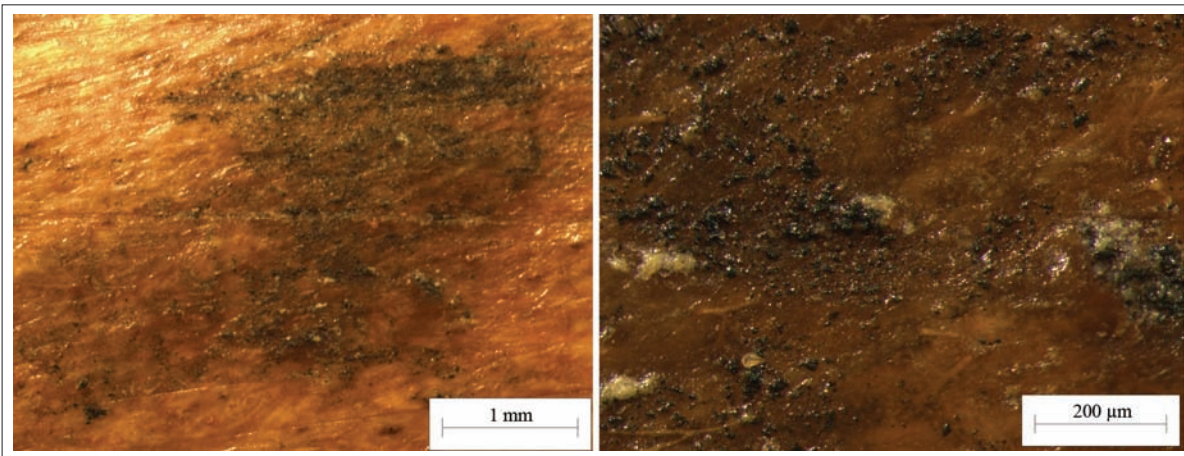


Fig. 10. Resin marking the eye (?). The staff from the Šventoji 3 site. Antler (photograph by Gvidas Slah).

to the underjaw and links with the line demarking the jawline.

The bottom of the staff is cut and sharp-edged. It was completed with a knife and later polished. The hole at the bottom of the staff was created using a flint drill from both sides. The hole shows traces of considerable wear, which indicates that the staff was carried upside-down (Fig. 8). Traces of this same method of carrying were also recorded on the small staff from the Šventoji 4 site.

The same archaeological dig led to the discovery of a second elk staff at the Šventoji 3 site (Fig. 9). The circumstances of the find and the staff itself are described

by Rimutė Rimantienė: ‘Approximately ten metres from this staff, not far from the edge of the lake, at a depth of 80 centimetres below the bottom of the lake, a second staff, similar to the first, was found. The staff itself was 42 centimetres long, and had a 23-centimetre-long head, measuring up to the ears. It was carved much the same way as the first, with the head made of the main beam at the base of the elk’s forehead, while the ears were made of the brow tines. However, the staff appears to be incomplete: the incisions at the back of the body have not been smoothed out, and the head lacks detail. The only characteristic feature present is the prominent growth on the underside of the jaw, the

I
 STONE AGE
 IN NORTHERN
 EUROPE:
 CHANGES IN
 LANDSCAPE,
 TECHNOLOGIES
 AND BELIEFS

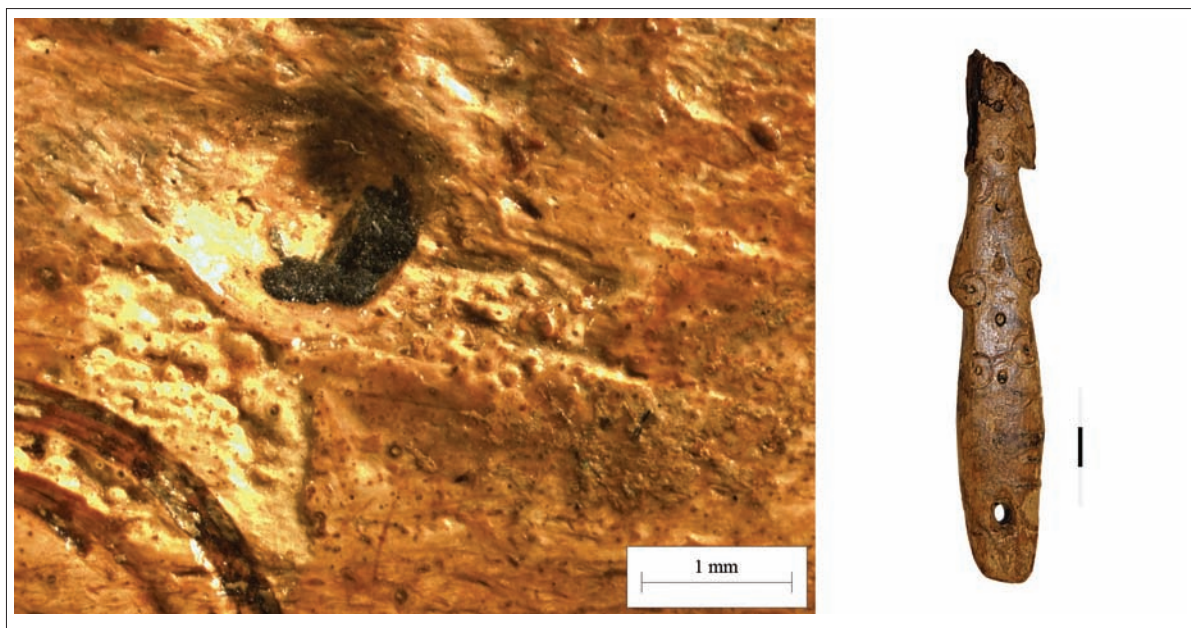


Fig. 11. Traces of resin in the decoration on the fish spear found at the Šventoji 6 site (photograph by Tomas Rimkus).

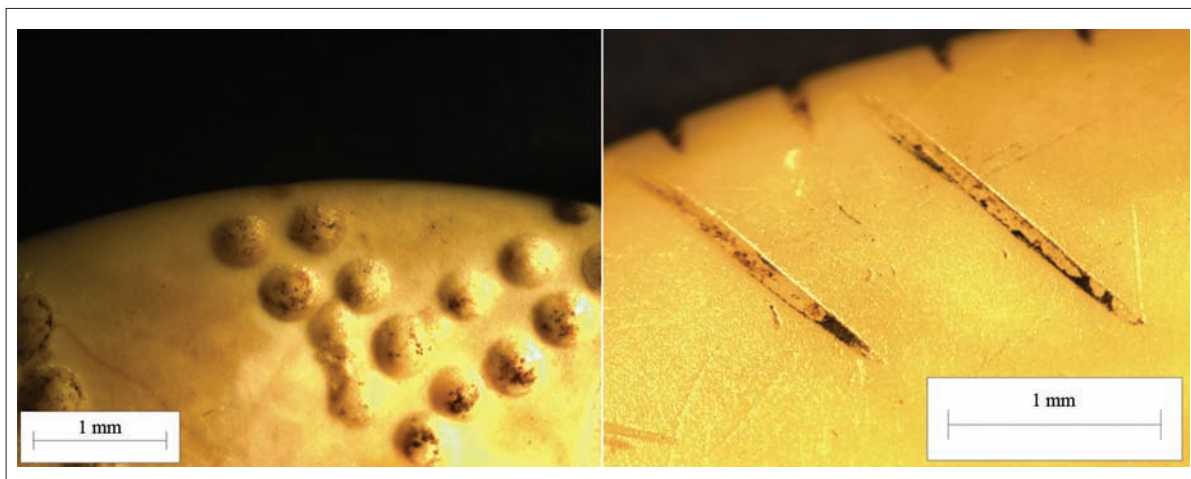


Fig. 12. Traces of resin in the decoration of amber artefacts found at the Daktariškės 5 site (photograph by Gvidas Slah).

dewlap. The surface has only been partially polished' (Rimantienė 1979, p. 106).

A traceological analysis simply confirmed this accurate description. A microscopic examination revealed traces of flint knife incisions, rough stone polishing, and chisel marks.

The microscopic inspection also revealed a trace of resin that is reminiscent of the animal's eye (Fig. 10). Perhaps Stone Age craftsmen used resin to sketch out their incision marks, or this was a complete artefact, and resin was simply used to depict what is carved out in the previously discussed staff from the same site. The use of resin in Stone Age decoration was a frequent phenomenon. The abundant use of resin is best

seen on a fish spear from Stone Age site 6 at Šventoji (Fig. 11).

At the Daktariškė 5 site, an amber pulley and chain link (Fig. 12) were discovered to have ornamentation of a dark-coloured material. A chemical analysis revealed that the decoration had been filled in with a material composed of pine resin, charcoal and beeswax (Butrimas et al. in this issue)

The third and smallest staff, measuring 14.8 centimetres, was found at the Šventoji 4 site, and is made from the rib of an elk (Fig. 13). Because the rib is so thin, the animal is depicted as a silhouette, as if it were a paper cut-out. Even a microscopic inspection of the staff's



Fig. 13. The staff from the Šventoji 4 site, 14.8 centimetres long. Bone, LNM EM 2136: 160 (photograph by Marius Iršėnas).

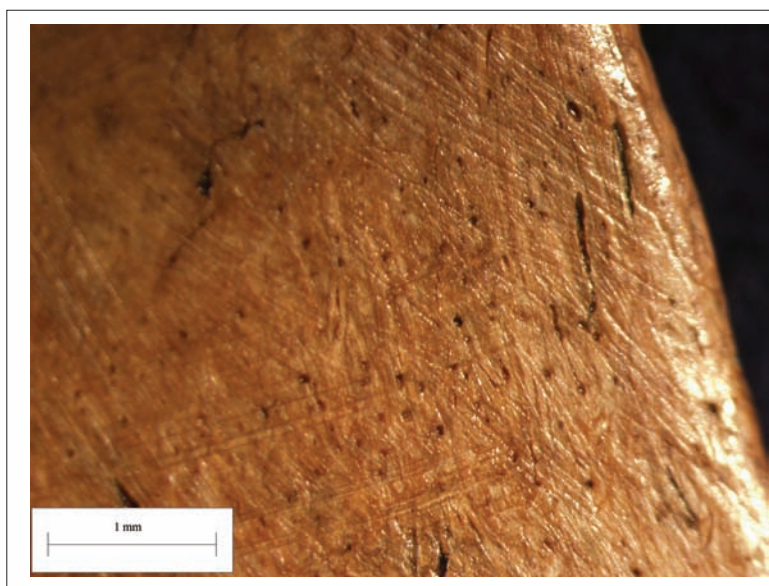


Fig. 14. A surface polished in multiple directions. The staff from the Šventoji 4 site. Bone (photograph by Gvidas Slah).

surfaces did not reveal any ornamentation or traces of details depicting the head. A flint knife was used to shape the rib, which was also polished with stone. The polishing work is rather chaotic, going in multiple directions (Fig. 14). In some places, the bone structure is revealed. It is possible that sand was used as an abrasive material. The ear and head were polished more meticulously. The hole drilled into the bottom of the staff is broken in the direction of the string that held it, clearly indicating that this staff was carried upside-down, much like its larger counterpart (Fig. 15).

Tools

As we have already mentioned in the description of the use-wear analysis, the staffs were shaped, cut and polished using a limited number of tools: flint knives, cutters, chisels and drills. The pieces were polished with stone, and maybe even sand. The thin lines are scratched out with single knife incisions to form a net-like decoration, while thicker and deeper inci-

sions, such as the ones depicting the elk's teeth, were made using several carving actions. Decorative incisions were made on already polished surfaces, and the surfaces were polished again once the lines had been carved out.

The flint tools found at the Šventoji 3 and 4 sites were not particularly expressive; however, they were enough to give the staffs their basic shape and subtle details (Fig. 16).

Elk staffs in petroglyphs and their upside-down hanging position

Motifs with elk staffs have long been discovered in Scandinavian petroglyphs, and are associated with magic manipulation (Kashina, Zhulnikov 2011, pp. 24–28). The use-wear analysis of the staff from the Šventoji 3 site seems to confirm this symbolic function, because no other traces of wear have been found to indicate that the staff was somehow used for beating elk, an idea suggested by Jan Magne Gjerde based on

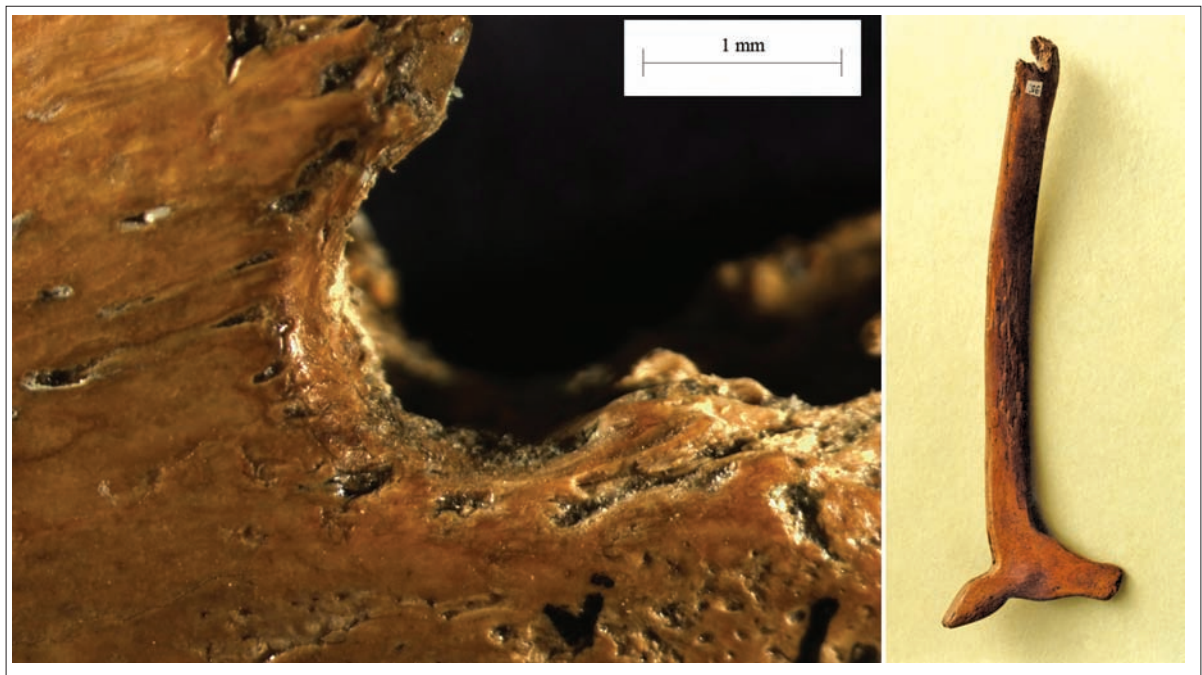


Fig. 15. The hole at the bottom of the staff from the Šventoji 4 site and the use-wear analysis indicate the position the staff was carried in (photograph by Gvidas Slah and Marius Iršėnas).

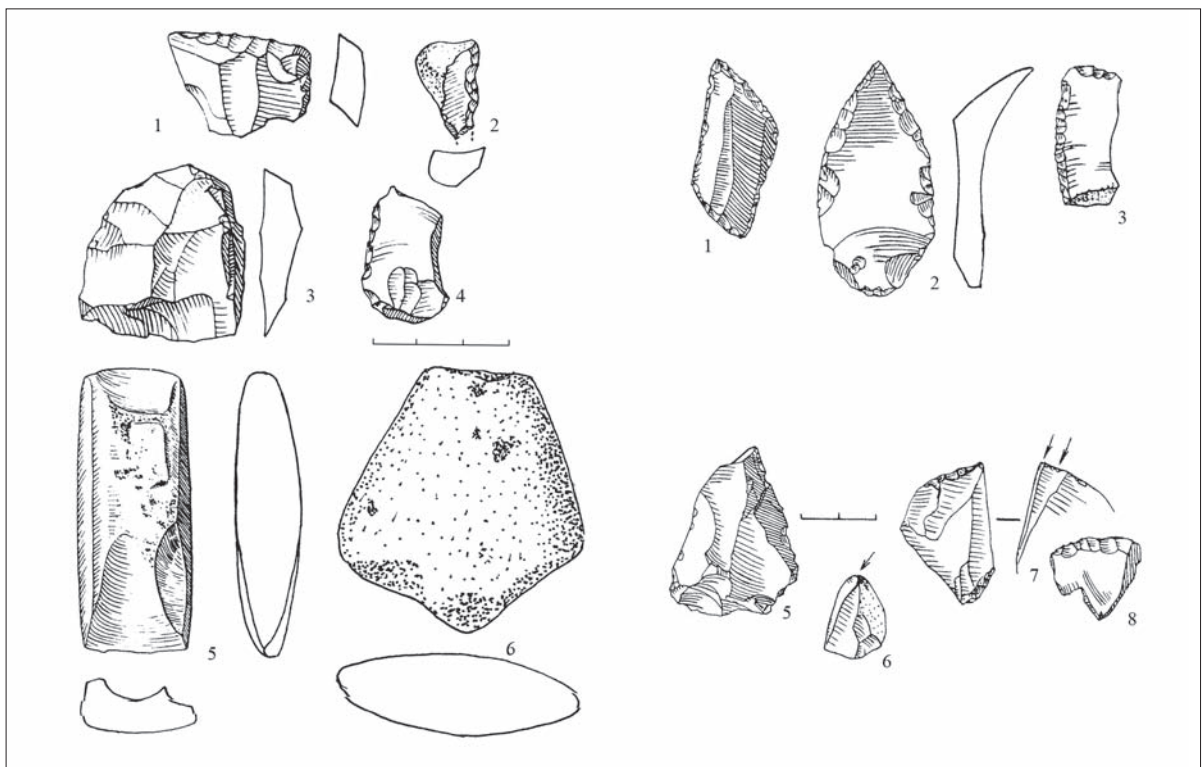


Fig. 16. Flint tools from Šventoji sites 3 and 4 that could have been used to make elk staffs (after Rimantienė 2005, Figs. 146, 169, 216).



Fig. 17. Petroglyph, Alta, Norway (after Gjerde 2016).



Fig. 18. Petroglyphs depicting figures with elk staffs in Nämforsen (after Larsson, Broström 2011).

I
 STONE AGE
 IN NORTHERN
 EUROPE:
 CHANGES IN
 LANDSCAPE,
 TECHNOLOGIES
 AND BELIEFS

a petroglyph from Alta (Fig. 17). He interprets the image depicted in Fig. 17 as the scene of killing an elk (Gjerde 2016, pp. 74–91).

Ethnographic literature on Nordic tribes presents various facts about the use of elk staffs for beating drums (Ivanov 1970, p. 162). However, our analysis of the staff from the Šventoji 3 site does not provide evidence for wear resulting from such use. Based on Scandinavian petroglyphs, the staffs were carried high in a vertical (Fig. 18: 1) or horizontal position, and also in an outstretched hand position (Kashina, Zhulnikov 2011 p. 25). One petroglyph possibly illustrates a staff tied at the waist in a horizontal position; probably the result of active movement, in what could be a ritual dance (Fig. 18: 2) (Larsson, Broström 2011, p. 14).

This image best illustrates how the staffs from the Šventoji 3 and 4 sites were carried. Even if the petroglyphs do not depict elk staffs specifically, it would be difficult to imagine a more suitable place to tie such

a staff other than at the waist. Our use-wear analysis has shown that the staff spent much of its time in an upside-down position.

Traces of this upside-down hanging have also been observed with zoomorphic and anthropomorphic figurines from Stone Age sites in Latvia, Estonia and Finland: Abora (Loze 1975, Figs. 7: 3, 4), Sarnate (Vankina 1970, Table LV: 6), Tamula (Kriiska et al. 2007, Fig. 8), Valma (Jaanits 1965, Fig. 7: 2), Astuvansalmi (Grönhagen 1994, Figs. 1, 2) and Metsäpirtti (Äyräpää 1945, Fig. 2) (Fig. 19).

We might compare elk staffs to miniature two-to-five-centimetre figurines, but the variety, chronological proximity and location of these figurines indicate a widespread tradition of carrying representations upside-down, the meaning of which we cannot unfortunately reconstruct. However, concluding that this tradition of carrying things upside-down does exist would provide additional information in the process of recon-



Fig. 19. Figurines that hang upside-down, from: 1 Aora (LNVM, photograph by Marius Iršėnas); 2 Sarnatė (LNVM, photograph by Marius Iršėnas); 3 Tamula (ARCTU, photograph by Marius Iršėnas); 4 Valma ARCTU (ARCTU, photograph by Marius Iršėnas); 5 Juodkrantė (after Klebs 1882, Table VIII: 21); 6, 7 Astuvansalmi (after Grönhagen 1994, Figs. 1–2); 8 Metsäpirtti (after Äyräpää 1945, Fig. 2). All pictures not to scale.

structuring perceptions and depictions of Stone Age life in the Baltic region.

Radiocarbon dating

Another significant result of this study was the successful radiocarbon dating of the sample of the staff from the Šventoji 3 site at a Kiel University laboratory (KIA-51366) 4766 ± 31 bp 3640–3510 (91.5%) or 3420–3380 (3.9%) cal BC. Up to this point, two dates had been known from the Šventoji 3 site: from a radiocarbon-dated wooden stake (Vib-9) 4410 ± 70 bp (3263–2917 BC), and animal bones from a site layer (Ki-9457) 4120 ± 70 bp (2873–2504 BC).

The date we pinpointed comes approximately 300 years before these two known dates; however, it does not change the dating of the actual site. There is substantial evidence to indicate that the more elegant 44-centimetre staff is of a similar age.

The smaller staff from the Šventoji 4 site can only be dated based on dated wood remnants and seal ribs found in the layers of the Šventoji 2 and 4 sites, which form a single complex. Fourteen dates have been established, in an interval ranging from 4036 to 2625 cal BC, averaging out at 3200 cal BC (Rimantienė 2005, pp. 286–288).

The staffs from Olenij Ostrov, which are similar to those found at the Šventoji sites, are dated at 6200 cal

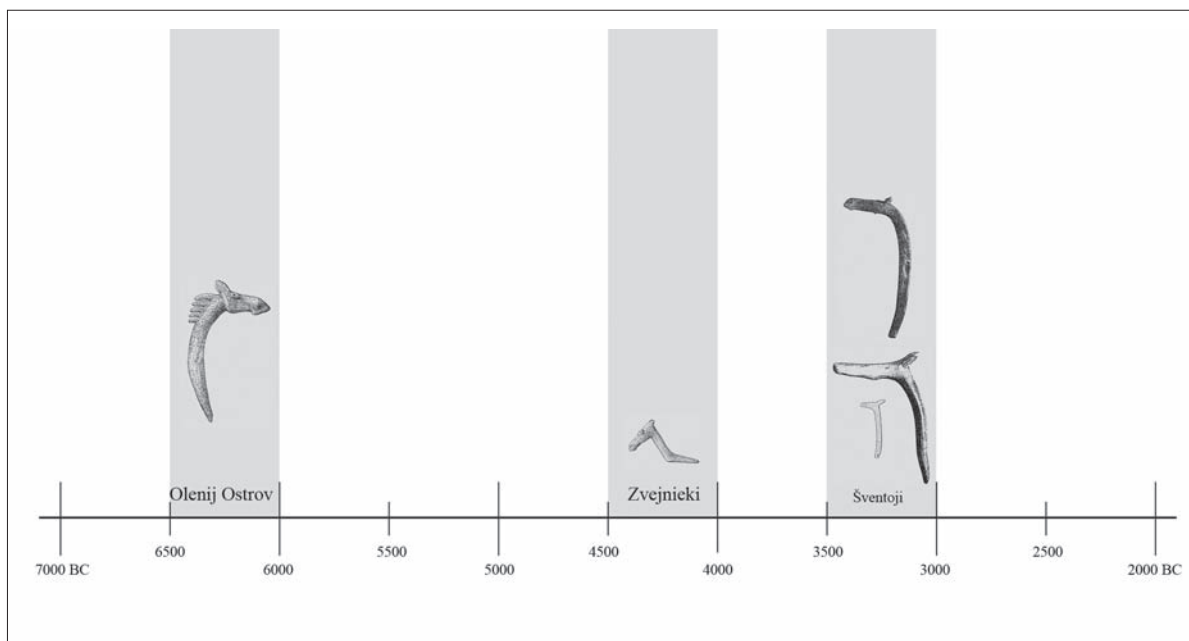


Fig. 20. The distribution of elk staffs from the Baltic region across time. All pictures not to scale (compiled by Marius Iršėnas).

BC (Mannermaa *et al.* 2008). They are separated by a geographical distance of 1,300 kilometres and a chronological distance of 2,500 years. This interval of time also includes an elk staff from collective grave No 274-278 of the Zvejnieki burial site, which is dated 4522–4317 cal BC (Zagorska 2006, p. 102). On the eastern side of the Baltic Sea, even more sculptural depictions of elk have been found, and even though they have not been dated directly, they belong to monuments and contexts that allow us to attribute them to the period from 6200 BC to 2000 BC (Kashina, Zhulnikov 2011, pp. 18-21). This long-standing use of elk staffs is also confirmed by dozens of petroglyphic depictions at Alta, Namforsen, Vingen, Kanozero, Kareckij Nos and Zalavruga in Scandinavia and Karelia, which have been dated to a period ranging from 5000 to 2000 BC (Gjerde 2010, 2016).

Conclusions

A use-wear analysis of three elk staffs from the Šventoji sites has revealed that the staffs were made using flint tools: a knife, a chisel and a drill, and a stone for polishing. A trace of resin observed through a microscope confirms the significance of resin as a material used to decorate Stone Age artefacts. The use-wear analysis did not reveal any evidence to suggest that the staffs were used to kill animals when hunting, or any traces of wear from other activity, such as beating drums. The holes drilled into the bottom of the two Šventoji staffs reflect a widespread tradition in the Baltic region at the

time (4000–2000 BC) of carrying various anthropomorphic and zoomorphic figurines upside-down. The radiocarbon-dating of the staff from the Šventoji site 3 confirms the known dates of the site, and is in line with the chronological order of other elk staffs in the Baltic region.

Acknowledgements

This research was funded by the Lithuanian Research Council, project No MIP-036/2015.

The authors are very grateful to Dr. John Meadows for conducting radiocarbon dating.

Abbreviations

- ARCTU – Archaeological Research Collection of Tallinn University
- LNM – Lithuanian National Museum, Vilnius
- LNVM – Latvian Museum of National History

References

- ÄYRÄPÄÄ, A., 1945. Die Verbreitung des Bernsteins in kammkeramischem Gebiet. *Suomen Muinaismuistoyhdistyksen Aikakauskirja – Finska Fornminnesföreningens Tidskrift*, 45, 11–25.
- BUTRIMAS, A., 2001. Zoomorfinė ir antropomorfinė akmens amžiaus dailė Rytų Baltijos regione (VIII-II tūkstantmetis pr. Kr.). *Istorija*, 49-50, 5–37.

- CARPELAN, CH., 1974. Hirven-ja karhunpääesineitä Skandinaviasta Uralille. *Suomen museo*, 81, 29–88.
- CARPELAN, CH., 1975. Älg-och björnhuvudföremål från Europas nordliga delar. *Finskt Museum*, 82, 5–67.
- GJERDE, J.M., 2010. *Rock art and Landscapes. Studies of Stone Age rock art from Northern Fennoscandia*. Doctoral thesis. Tromsø.
- GJERDE, J.M., 2016. A Stone Age Rock Art Map at Nämforsen, Northern Sweden. *Adoranten*, 2015, 74–91.
- GOMBRICH, E.H., 1960. *Art and Illusion. A Study in the Psychology of Pictorial Representation*. London.
- GRÖNHAGEN, J., 1994. Ristiinan Astuvansalmi, muinainen kulttipaikkako? *Suomen Museo*, 101, 5–18.
- GURINA, N.N., 1972. Oleneostrovskii mogil'nik. *Materialy i issledovaniia po arkhelologii SSSR*, 47. Moskva.
- IRŠĖNAS, M., 2000. Elk figurines in the Stone Age art of the Baltic area. *Acta Academiae Artium Vilnensis*, 20, 77–85.
- IRŠĖNAS, M., 2006. Anthropomorphic and zoomorphic figurines from the Zvejnieki burial ground in the context of the Baltic area Statistical regularities or exceptional cases? In: L., LARSSON, I., ZAGORSKA, eds. *Back to the Origin. New Research in the Mesolithic-Neolithic Zvejnieki Cemetery & Environment, Northern Latvia. Acta Archaeologica Lundensia Series in 8*, No. 52. Stockholm, 301–308.
- IRŠĖNAS, M., 2010. Anthropomorphic and zoomorphic Stone Age art in Lithuania, and its archaeological cultural context. *Archaeologia Baltica*, 13, 175–190.
- JAANITS, L., 1957. Neue Gräberfunde auf dem spätneolithischen Wohnplatz Tamula in Estland. *Suomen Muinaismuistoyhdistyksen Aikakauskirja – Finska Fornminnesföreningens Tidskrift*, 58, 80–100.
- JAANITS, L., 1965. Über die Ergebnisse der Steinzeitforschung in Sowjetestland. *Finskt Museum*, 72, 5–45.
- KASHINA, E., ZHULNIKOV, A., 2011. Rods with elk heads: symbol in ritual context. *Estonian Journal of Archaeology*, 15, 18–31.
- KLEBS, R., 1882. *Der Bernsteinschmuck der Steizeit von der Baggerei bei Schwarzort und anderen Lokalitäten Preussens*. Beiträge zur Naturkunde Preussens 5. Königsberg.
- KRIISKA, A., LÕUGAS, L., LÕHMUS, M., MANNERMAA, K., JOHANSON, K., 2007. New AMS dates from Estonian Stone Age Burial sites. *Estonian Journal of Archaeology*, 11 (2), 83–121.
- KUNSKAS, R., 2005. Das Okosystem des Lagunensees von Palanga und Šventoji im Neolithikum. In: R. RIMANTIENĖ. *Die Steinzeitfischer an der Ostseeelagune in Litauen. Vilnius: Litauisches Nationalmuseum*, p. 23–34.
- LARSSON, T.B., BROSTRÖM, S.G., 2011. *The Rock Art of Nämforsen, Sweden. The survey 2001-2003*. UMARK 6, Umeå.
- LIETUVOS FAUNA, 1988. T. 1: Žinduoliai. J. PRUSAITĖ, ed. Vilnius.
- LOZE, I., 1970. Seno ticejumu un tradiciju atspoguļojums akmens laikmeta maksla Austrumbaltija. *Arheologija un etnografija*, 9, 9–30.
- LOZE, I., 1975. Neolithic Amber Ornaments in the Eastern Part of Latvia. *Przeglad Archeologiczny*, 23, 49–82.
- MANNERMAA, K., PANTELEYEV, A., SABLIN, M., 2008. Birds in Late Mesolithic Burials at Yuzhnyi Oleniy Ostrov (Lake Onega, Western Russia) – What Do They Tell about Humans and the Environment? *Fennoscandia Archaeologica*, 25, 3–25.
- PILIČIAUSKAS, G., MAŽEIKA, J., GAIDAMAVIČIUS, A., VAIKUTIENĖ, G., BITINAS, A., SKURATOVIČ, Ž., STANČIKAITĖ, M., 2012. New archaeological, paleoenvironmental, and 14C data from the Šventoji Neolithic sites, NW Lithuania. *Radiocarbon*, 54 (3–4), 1017–1031.
- RIMANTIENĖ, R., 1979. Šventoji. Narvos kultūros gyvenvietės I. Vilnius: Mokslas.
- RIMANTIENĖ, R., 2005. *Die Steinzeitfischer an der Ostseeelagune in Litauen*. Vilnius: Litauisches Nationalmuseum.
- VANKINA, L. V., 1970. *Torfiannikovaia stoianka Sarnate*. Riga: Zinatne.
- WYSZOMIRSKA, B., 1984. Figurplastik och gravskick hos Nord- och Nordösteuropas neolitiska fångstkulturer. *Acta Archaeologica Lundensia, series in 4°*, N° 18. Lund.
- ZAGORSKA, I., 2006. Radiocarbon chronology of the Zvejnieki burials. In: L., LARSSON, I., ZAGORSKA, eds. *Back to the Origin. New Research in the Mesolithic-Neolithic Zvejnieki Cemetery & Environment, Northern Latvia. Acta Archaeologica Lundensia Series in 8*, No. 52. Stockholm, 5–24.

Marius Iršėnas
 Institute of Art Research
 Vilnius Academy of Art
 Dominikonų St 15, LT-01131 Vilnius, Lithuania
 E-mail: marius.irsenas@vda.lt

Tomas Rimkus
 Institute of Baltic Region History and Archaeology
 Klaipėda University
 Herkaus Manto St 84, LT-92294, Klaipėda, Lithuania
 E-mail: rimkus74@gmail.com

Adomas Butrimas
 Institute of Art Research
 Vilnius Academy of Art
 Dominikonų St 15, LT-01131 Vilnius, Lithuania
 E-mail: adomas.butrimas@vda.lt

Gvidas Slah
 Research and Preservation Centre
 of Applied Cultural Heritage
 Vilnius Academy of Art
 Kęstučio St 3-2, Telšiai, Lithuania
 E-mail: qwidar@gmail.com

ŠVENTOSIOS BRIEDŽIAI: DAR VIENAS ŽVILGSNIS IŠ ARČIAU

**MARIUS IRŠĖNAS, TOMAS RIMKUS,
 ADOMAS BUTRIMAS, GVIDAS SLAH**

Santrauka

2016 m. trasologinių ir radiokarboninių metodais buvo tyrinėtos Šventosios 3 ir 4B gyvenvietėse (Vakarų Lietuva) rastos iš rago ir kaulo pagamintos briedžius

vaizduojančios lazdos. Trasologiniai lazdų tyrimai atskleidė, kad jos buvo gamintos itin kruopščiai, naudojant aštrius titnago ir kitokios uolienos įrankius. Lazdose stengtasi kuo daugiau vaizduoti anatomines briedžių dalis. Ant dirbinių rasta daug įkurtų, įbrėžimų, šlifavimo pėdsakų, kurie rodo sudėtingą ir ilgą jų gamybos procesą. Ant vienos iš Šventosios 3 gyvenvietėje aptiktos lazdos akių vietoje rasta dervos. Manytina, kad juoda derva pabrėžė gyvūno akis, kurios nebuvo kruopščiai suformuotos titnago įrankiais. Šventosios 3 ir 4B gyvenvietėse titnago įrankių rasta labai nedaug, tačiau tarp jų pasitaikė peilių, grąžtelių ir kaltelių, kurie galėjo būti naudojami gaminant lazdas. Viena iš Šventosios 3 gyvenvietėje rastų lazdų datuota 3640–3510 cal BC laikotarpiu, kuris mena vidurini neolitą. Iki šiol vyksta diskusijos dėl šių dirbinių paskirties. Trasologiniais tyrimais nepavyko gauti duomenų apie lazdų naudojimą. Ant jų paviršiaus nerasta jokių nusidėvėjimo pėdsakų ar kontaktų su labai kietomis medžiagomis. Atlikta mikroskopinė analizė tik patvirtintų lazdų ritualinę-simbolinę prasmę.

I

STONE AGE
IN NORTHERN
EUROPE:
CHANGES IN
LANDSCAPE,
TECHNOLOGIES
AND BELIEFS