

THE DECORATED SPINDLE-SHAPED BONE DAGGER FROM ŠARNELĖ: THE EARLIEST EXAMPLE OF HUNTER-GATHERER MOBILE ART IN LITHUANIA

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Abstract

This paper presents the latest data on a spindle-shaped decorated bone dagger, which was found as a stray find in the village of Šarnelė in northwest Lithuania, and which recently been dated to the Final Palaeolithic. It is currently the only one such example of osseous technology in Lithuania dated to this period. In 2016, we started to reinvestigate the Stone Age material from the Samogitian highland by AMS radiocarbon (^{14}C) dating, stable isotopes, use-wear and Raman methods. AMS dating showed that the decorated dagger discovered in the surroundings of the drained Lake Ertenis and the River Varduva at Šarnelė currently is one of the oldest prehistoric art objects found in Lithuania and possibly in the eastern Baltic region as well. The dagger was also analysed by use-wear method, which helped to identify some stages of the production of the article itself and its decoration. The paper presents the first results of research of this artefact in the wider geographical and taxonomic context of the Final Palaeolithic in northern Europe.

Key words: osseous technology, prehistoric art, AMS ^{14}C data, use-wear, Final Palaeolithic, northwest Lithuania.

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Introduction

In the mid-20th century, the extensive draining of fields, swamps and lakes, as well as the deepening of riverbeds, took place in Lithuania. Throughout the country, numerous stray bone and antler artefacts ascribed to the Stone Age were collected (Puzinas 1938; Kulikauskas et al. 1961; Rimantienė 1974a). Most of them ended in private collections, but some were delivered to local museums, where they have been stored along with the information on their finding circumstances, and exhibited up until today. For a long time, stray Stone Age finds of bone and antler have undervalued as artefacts discovered without a clear context of settlement, and providing less scientific information. However, recent analyses of stray slotted and barbed points, as well as harpoons, a Lyngby axe and a human figurines from the east Baltic (Eriksen et al. 2014; Meadows et al. 2014; Jonuks 2016; 2019; Ivanovaitė et al. 2018; Bjørnevad et al. 2019; Butrimas 2019; Philippsen et al. 2019; Zagorska et al. 2019), prove that stray artefacts, and especially their direct dating, can contribute much to an understanding of the complexity of certain taxonomies, classic typology and symbolism, and the cultural development of the Stone Age.

A collection of such stray bone and antler finds were found between 1940 and 1965 during the dredging of the River Varduva in the village of Šarnelė in north-

west Lithuania. The assemblage consists of six finds: two spearheads/daggers, one made from a longitudinally split bone and the other from a longitudinally split antler, a harpoon with one barb, an unidentified tool fragment made of antler, a red deer antler T-shaped axe, and a decorated spindle-shaped bone dagger (Valatka 1968; Butrimas 1996). All the finds are well preserved. Despite their frequent mention in studies of the Stone Age in Lithuania (Rimantienė 1996; Girininkas 2009), these artefacts have not been studied in detail at all. The first scientific research on the articles was launched in 2016, within the framework of the research project 'Prehistoric Art: Ritual, Context and Symbolism'. During the analysis, the red deer antler T-shaped axe (Lübke et al. 2018), one dagger made of longitudinally splitted bone (Butrimas 2019, 277) and the ornamented spindle-shaped bone dagger were dated by AMS. The latter artefact is the main subject of the present paper.

The Šarnelė site

The village of Šarnelė is located in northwest Lithuania, in the region called Samogitian highland (Fig. 1). This area is dominated by morainic hills and a wide network of rivers and lakes, most of which are now heavily drained or completely transformed into peat bogs (Guobytė 2004; Kuskas 2005; Kabailienė et

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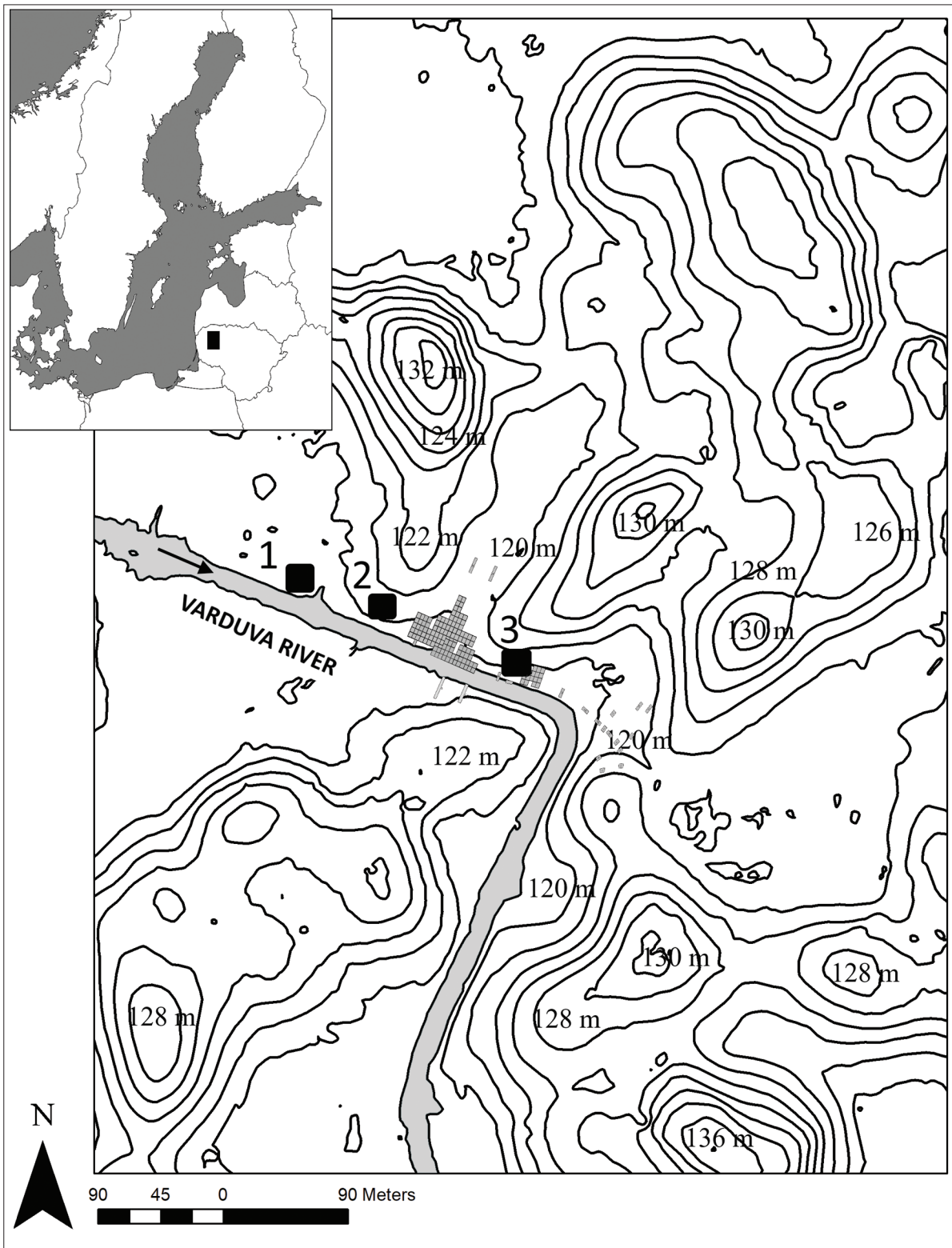


Fig. 1. The approximate location of three stray bone and antler finds (marked by numbers) discovered in 1940–1965. Excavation areas of 1973 and 1981–1982 at the Šarnelė settlement are marked in grey. The approximate location of the decorated spindle-shaped bone dagger is marked by No 3 (according to Valatka 1968 and Butrimas 2019).

al. 2015). The Šarnelė bone and antler tools were discovered during the dredging of the Varduva riverbed, which in the past was connected to the former, now drained, Lake Ertenis. As has already been mentioned, the artefacts were found during 1940–1965, and only in a few cases were their find-spots recorded even approximately (Valatka 1968). Nevertheless, these finds inspired the first archaeological field investigations at Šarnelė. Initially, it was assumed that any prehistoric settlements would be located on closets morainic hills on one side of the river, but the hills were heavily eroded by both anthropogenic and natural processes; therefore, the search for ancient settlements moved to the foot of the hills, closer to the banks of the River Varduva. The first archaeological investigation was launched in 1973, only a couple of metres away from the river, with an excavated area of 124 square metres (Rimantienė 1974b). It revealed that the area contains wetland settlement with well-preserved organic artefacts. Excavations unearthed hunting and working tools made from animal bones and antlers, fishing gear (net sinkers and floats), ornaments made of amber and animal teeth, as well as a number of pottery sherds, some with cord imprints (Girininkas 1977). Due to the abundance of intact wooden piles uncovered it was even suggested that the site might have been a pile-dwelling settlement (Girininkas 2005). The site was dated to the end of the Neolithic, approximately to the third millennium cal BC, and was named as the Šarnelė ancient settlement.

A second stage of archaeological fieldwork took place there in 1981 and 1982, when the Šarnelė settlement was in danger of being destroyed by dredging works. An area of 568 square metres was excavated, and many new finds, along with the first radiocarbon dates, confirmed that the settlement dates to the end of the Neolithic (Butrimas 1996). During the last archaeological excavations, bone spearheads and conical arrowheads were uncovered, along with hunting and working tools made of flint and bone (harpoons and barbed points), more net sinkers and floats, as well as ornaments made of animal teeth and wild boar tusks (Butrimas 1996). Zooarchaeological material included waterfowl, and both wild and domestic animal bones (Girininkas & Daugnora 2015, Table 40). However, recent AMS studies of zooarchaeological material found in the settlement show that it somehow contains admixture of domestic animal bones from the Bronze Age and even the Medieval period (Girininkas & Daugnora 2015, Table 55; Piličiauskas et al. 2017, Table 2). Nevertheless, research in both 1973 and 1981–1982 shows that there was a phase when the people of Corded Ware culture inhabited this place in the Late Neolithic (Butrimas 1996; Piličiauskas 2018; Piličiauskas et al. 2018),

while the fragments of pottery of hunter-gatherers could also indicate cultural interaction between two different communities at this site.

Although the stray bone and antler artefacts collected in 1940–1965 led to the first archaeological field research at Šarnelė, no direct analogues, nor by chronology or typology, of them were found during both excavations. Based on analogies, previously they were mostly attributed to the first half of the Mesolithic and the Neolithic (Valatka 1968; Girininkas 1977).

Material and methods

The dagger

The bone dagger from Šarnelė is kept and exhibited at the Alka Museum in the town of Telšiai in western Lithuania. The exact function of this artefact (its museum inventory No is 12.011, Arch-1904) is not known. It could potentially be attributed to a number of other tool types, but in Lithuanian historiography this tool is called and known as a dagger (Butrimas 2019). The dagger is made from a long-split bone, which probably came from a large terrestrial mammal, such as an elk (*Alces alces*) or reindeer (*Rangifer tarandus*) (Fig. 2). The find is 22 centimetres long, and two to three centimetres wide. The handle is broken, so the complete tool would have been a little longer. The bone surface is heavily worked. The upper part of the dagger is decorated with incised lines, which criss-cross each other, forming numerous small triangles and rhombuses (Fig. 3). Therefore, this style of decoration is very similar to a net pattern. The decoration is visible on both surfaces of the dagger.

AMS 14C dating

Using a dental drill, an inconspicuous area of the bone surface was abraded to expose clean cortical bone, and a shallow oval hole was drilled in order to collect 250 milligrams of bone powder without risking damage to the artefact. So the sampling scar is invisible when the artefact is displayed. Bone powder from both the dating sample and the abraded surface was tested by ATR-FTIR spectroscopy to check for the presence of consolidants, which may have been used to conserve the find, which has a waxy appearance. The two spectra are identical, and resemble well-preserved bone. The sample was dated at the Royal Institute of the Cultural Heritage in Brussels, Belgium, following Boudin et al. (2015). It was ultrasonicated in acetone to remove any trace of consolidants, before normal collagen extraction, combustion, graphitisation and measurement. An aliquot of the extracted collagen was analysed by



Fig. 2. The spindle-shaped decorated bone dagger from Šarnelė (photograph by J. Butrimaitė).



Fig. 3. An enlarged part of the bone dagger's decorated surface (photograph by J. Butrimaitė).

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Elemental Analysis-Isotope Ratio Mass Spectrometry (EA-IRMS), to measure the weight concentrations of carbon and nitrogen and the stable isotope ratios $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ (expressed in parts per thousand [‰] differences from the respective international standards, V-PDB and Air).

Use-wear

Use-wear analysis was conducted by Olympus SZX16 stereoscopic microscope with an attached Olympus DP72 camera in order to study the decoration on the artefact. The images obtained were processed with Image-pro express 6.3 software. The best images of the tool's surface were obtained at between 7x and 100x magnification. Its entire surface was analysed, but the decorated area was studied closer, in order to detect the pattern of ornamentation.

Results and discussion

The bone sample from the dagger was of $10\,408 \pm 41$ age and gave a good collagen yield, satisfactory elemental concentrations, and stable isotope values consistent with the bone being from a terrestrial herbivore, and a conventional ^{14}C age of $10\,408 \pm 41$ BP, equivalent to $10\,569\text{--}10\,134$ cal BC (95.4 % probability) (Table 1; Fig. 4). This is currently the earliest known ^{14}C date from a decorated osseous artefact in Lithuania and possibly in the eastern Baltic area. The date falls within the Younger Dryas stage, when the landscape was sparsely vegetated and Final Palaeolithic tanged points were still in use by prehistoric communities for hunting large terrestrial mammals (Stančikaitė 2006; Ukkonen et al. 2006; Girininkas 2009; Burdukiewicz 2011). The small number of Final Palaeolithic osseous tools discovered in the East Baltic (see below) does not allow us to draw wider conclusions about the exploitation of animal carcasses, but even very infrequent dated cases, such as the one from Šarnelė, confirm their use, including their use as a raw material for artwork.

Use-wear analysis of the bone dagger indicates many cut marks and scraping traces which were left by the manufacture techniques of the tool. Only traces of manufacture were observed; no evidence of the tool's use was detected. The pattern of these marks confirms that sharp stone tools were used for its manufacture. Similar traces that can be seen compared them to the analysed bone points and harpoons from a Mesolithic context in northern Europe (Zhilin 2015; Orłowska & Osipowicz 2018). As the dagger is of stray origin, it is difficult to determine its separate stages of manufacture without the wider bone assemblage and its debris. Nevertheless, it is clear that the dagger is made from a long

split bone, and microscopic observation indicates that after it was split, it was thinned by grinding it against a rough surface, probably a slab of sandstone. Only afterwards was the upper part of the dagger decorated. The decoration was shaped by sharp tools, probably a burin and a knife. The use of a burin is evident by the regular, deep and wide incised lines (Fig. 5). Small barbs can be noticed on the dagger's sides near the tip. The incision pattern of these barbs differs from the other decoration, and it is possible that a stone knife with very sharp and narrow cutting edges was used to form it (Fig. 6). These barbs could indicate that the tool indeed could have been used as a lethal weapon, a dagger, for instance. However, the real function of the tool is not known. The surface of the decoration contained no visible remains of organic residues.

Bone and antler artefacts dating from the Stone Age have so far been discussed in Lithuanian prehistoric art studies mostly within the context of Neolithic anthropomorphic or zoomorphic images (e.g. Butrimas 2000; Iršėnas 2000; 2007; 2010; Iršėnas et al. 2018). This was mainly due to the lack of decorated bone and antler artefacts from the Late Palaeolithic and Mesolithic, as well as the lack of radiocarbon studies of them, and the low interest in stray finds kept in museum magazines. When analysing the Šarnelė dagger's decoration, a clear tendency can be noticed in its pattern, i.e. it appears as intersecting lines on both sides of the tool. Only the upper part of the tool is decorated, the remaining lower area of its surface has only small cut marks and scratches that formed during the production stages of the dagger. No similar hunter-gatherer tool with exact age and decoration has so far been discovered in Lithuania, we also do not have any data on such analogies in the rest of eastern Baltic area. The chronologically and geographically closest parallel at the moment could be the fragments of reindeer antler found in western Lithuania and dated to the very end of the Younger Dryas. Its surface has clear cut marks and seven parallel incisions have been detected on one of the broken antler's tines, the purpose of which is still not clear (Rimkus 2018). It is likely that this may also be some kind of representation of prehistoric art at the end of the Younger Dryas, but it is much more likely that this tine is an incomplete tool. However, further analysis has to be conducted in order to clarify this assumption.

For several decades in Lithuania, it was thought that the earliest example of hunter-gatherer's art, ascribed to Swiderian culture, was a stone slab from the Eiguliai 1A site with many incised lines on its surface, and re-touched flint blade which could represent human figurine (Rimantene 1971). However, a recent re-analysis of the slab proved that it was probably used as a cutting

Table 1. AMS ¹⁴C dating and EA-IRMS data for the spindle-shaped bone dagger from Šarnelė in northwest Lithuania. The date was calibrated by OxCal v4.3.2. (Bronk Ramsey 2009) and the IntCal13 atmospheric curve (Reimer *et al.* 2013)

Subject	Sample	Lab. No.	%C	%N	C:N	δ ¹³ C (‰)	δ ¹⁵ N (‰)	¹⁴ C Age BP	Calibrated date (>95% probability)
Bone dagger (12.011 Arch 1904)	250 mg bone powder, 6.9% collagen yield	RICH-22953	37.3	12.93	3.4	-21.5	0.5	10,408±41	10569–10134 cal BC 12518–12083 cal BP

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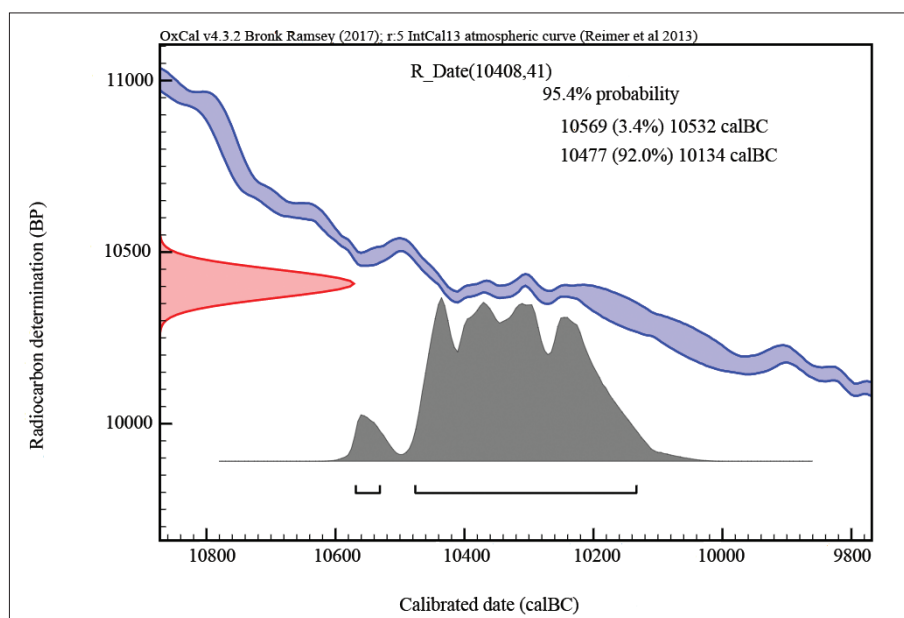


Fig. 4. AMS ¹⁴C data of a sample taken from the decorated bone dagger. The date was calibrated by OxCal v.4.3.2 (Bronk Ramsey 2009) and the IntCal13 atmospheric curve (Reimer *et al.* 2013).

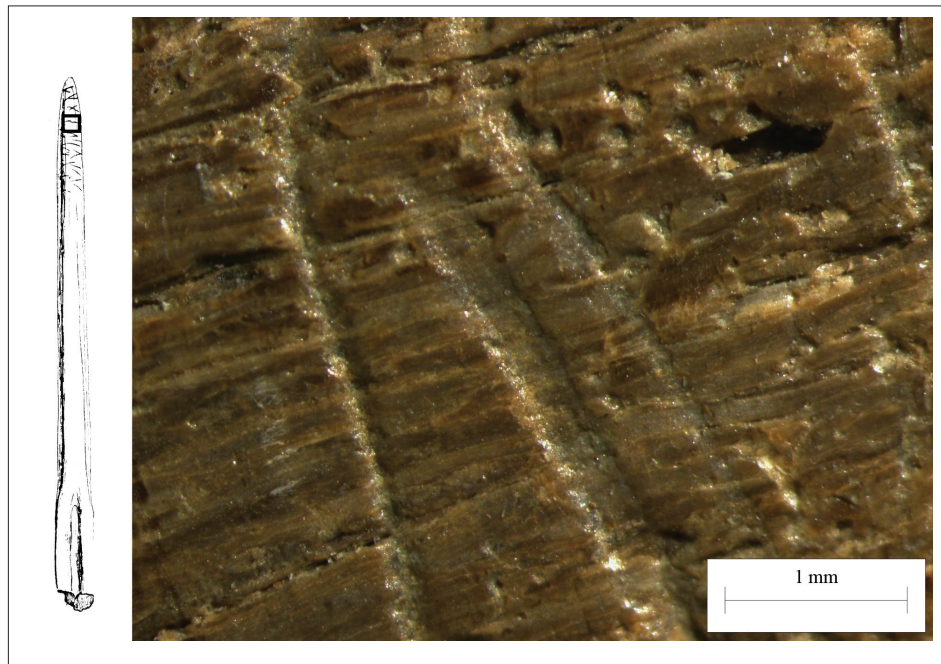


Fig. 5. A magnified view of incised lines forming the dagger's decoration: 40x magnification.

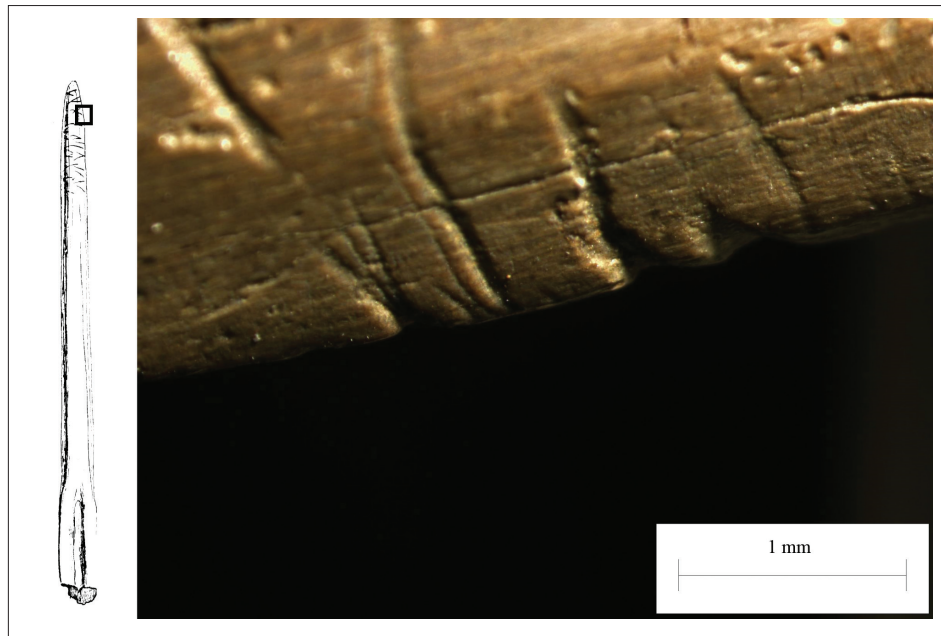


Fig. 6. A magnified view of the small barbs: 48x magnification.

table, and the lines formed as a consequence of use-wear (Šatavičius 2016; Gudaitienė 2018). Retouched flint blade still needs its own studies, however parallel tool types from Spiginas grave 4 hints that it could be simple flint knife (Butrimas 2012).

These debatable cases are considered to be of the Final Palaeolithic stage; however, mobile art of the Mesolithic period in Lithuania is currently represented by just a few examples as well. There is still a lack of bone and antler art objects dated to the Early and Middle Mesolithic, but some examples can be found from the Late Mesolithic, like Smeltė site, for instance (Piličiauskas et al. 2015). However, we can see that the pattern of Late Mesolithic ornamentation changes and improves compared to the Younger Dryas specimen from Šarnelė, but similar net patterns can still be found in some parts of the northern European Mesolithic (see below). Complex bone and antler decoration techniques dominate during the second part of the Mesolithic; for instance, the removal of separate parts of an antler's cortex, or an improved geometrical scheme, consisting of lines, triangles, incisions, etc (Piličiauskas et al. 2015). This is especially noticeable in examples of portable art from Mesolithic southern Scandinavia (Nash 1998). It seems that the introduction of pottery has not changed the pattern of decoration in any way in the territory of Lithuania, and it can be found on osseous tools from the 5th millennium cal BC as well. Observable changes in patterns of decoration and depictions only occur during the later stages of East Baltic Neolithic. During it, the net pattern can be observed on pots of Narva, Comb Ware and Pitted Ware cultures; while it can also be detected on some bone artefacts from the Žemaitiškė 2 and Kretuonas 1 sites in eastern Lithuania (Girininkas 1990). However, when comparing the net decoration between these cases and the example of the Šarnelė dagger, differences between them in the regularity and the precision of the decoration can be clearly observed.

If we look closer at the wider northern European Late Glacial mobile art context, the well-known decorated stray bone and antler pieces from Fogens Enge (Funen, Denmark), Rusinowo (northwest Poland) and Poggenwisch (northern Germany) can be mentioned as classic examples (Bosinski 1978; Vang Petersen 2019, Fig. 1; Płonka & Kowalski 2017), but we will still not find direct analogies with the bone dagger from Šarnelė. Although the shape and type of the dagger can be traced back to Aurignacian, Gravettian and Magdalenian cultures of Central and southwest Europe of the Late Palaeolithic (Wenzel & Fernandez 2004; Beldiman 2012), decoration on these tools is absent. The shape and decoration of the dagger from Šarnelė is much closer to some specimens from the Mesolithic. Some bone

points and daggers from Bloksbjerg, Kongemose and Søborg from Kongemose and Ertebølle culture sites in southern Scandinavia, for example, are very similar in shape and decoration to the one discovered at Šarnelė (Płonka 2003). The same tendency can be seen at the Nizhneye Veretye I Boreal site, where slotted bone points and daggers have the same pattern of decoration on their surface (Oshibkina 1989; Dolukhanov 2008, and references therein). However, as we can see, all these analogues have far too great chronological differences compared to the specimen from Šarnelė. This leads us to the conclusion that this type of decoration has its origins in the Final Palaeolithic period, and the tradition may have continued in the Early Holocene. However, there is still a need to gather more data relating to the stratigraphical and wider geographical context of the same age.

The species of the bone from which the dagger was manufactured has still not been determined. However, it seems it could belong to a large terrestrial mammal, and zooarchaeological data indicates that during the Younger Dryas and the beginning of the Preboreal, reindeer were still present in the eastern Baltic (Ukkonen et al. 2006; Girininkas & Daugnora 2013; Sommer et al. 2014). In northwest Europe, mainly in northern Germany and southern Scandinavia, a wider range of Late Glacial terrestrial mammal species has been recorded. For instance, besides reindeer, elk and wild horse (*Equus ferus*) remains were found in several sites dating from the Allerød and Younger Dryas (Bratlund 1996; Eriksen 1996, Table 6, and references therein), while in the East Baltic, at present only reindeer dominates Late Glacial faunal assemblages. The closest variants in Late Upper Palaeolithic terrestrial mammal data, such as wild horse, were found in northwest Belarus, close to the border of southern Lithuania (Stančikaitė et al. 2011). The possibility that the Šarnelė bone dagger was made of reindeer bone cannot be ruled out. On the other hand, isotopically, elk would be a better candidate, as both $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ are relatively low (Drucker et al. 2010). This still needs to be tested by an appropriate research method in the future, such as aDNA or ZooMS (e.g. Horsburgh 2008; Brandt et al. 2018). However, if the latter studies support the present evaluation of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values, then it would demonstrate the first actual dated elk evidence in the Younger Dryas in Lithuania.

At present, the Šarnelė bone dagger is only the second osseous artefact in Lithuania dated to before the end of the Pleistocene. Previously, a stray so-called Lyngby axe, manufactured from reindeer antler, from Parupė in northern Lithuania, was dated to the Allerød (Girininkas et al. 2016; 2017). Another two stray tools made of reindeer antler and dating from the same period as

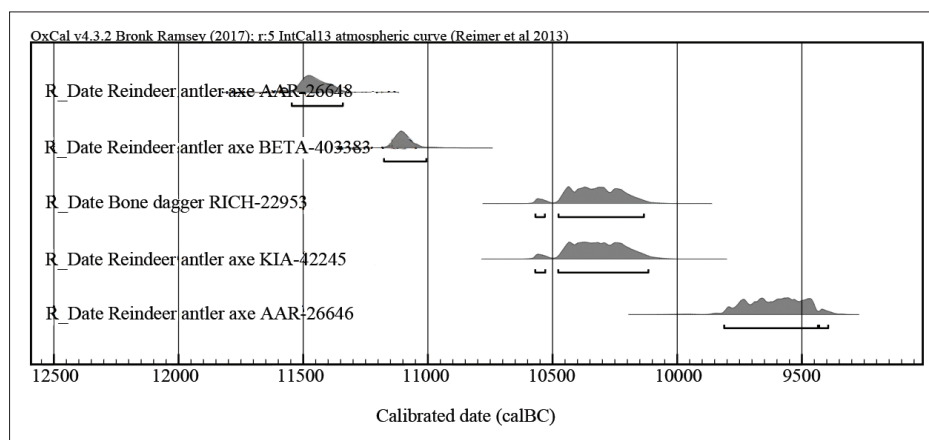


Fig. 7. Calibration plot of available AMS 14C dates of directly dated Final Palaeolithic stray bone and antler tools in the East and southeast Baltic region. The 14C age of reindeer antler axes was referred from Zagorska 2012 (KIA-42245), Girininkas et al. 2016 (BETA-403383) and Philippsen et al. 2019 (AAR-26648 and AAR-26646). All dates were calibrated by Oxcal v.4.3.2 (Bronk Ramsey 2009) and the IntCal13 atmospheric curve (Reimer et al. 2013).

the bone dagger from Šarnelė were found in Latvia and former East Prussia (nowadays the Kaliningrad Oblast and northeast Poland) (Zagorska 2012; Philippsen et al. 2019). Figure 7 indicates that reindeer antler axes currently dominate dated Late Pleistocene finds of organic origin in the east and southeast Baltic region, all of which were found as stray finds in former East Prussia, Latvia and Lithuania (Fig. 7) (Gross 1939; La Baume 1942; Zagorska 2012; Girininkas et al. 2017). Their current AMS 14C dating fits them into the period between Allerød and Younger Dryas, while additional examples of reindeer antler axes from former East Prussia and Greater Poland confirm their technological continuation into the very beginning of the Early Holocene (Goslar et al. 2006; Philippsen et al. 2019). However, at the moment, the only different type of osseous artefact from this period is the bone dagger found at Šarnelė. It is also important to add that this is the only decorated piece of East Baltic Late Palaeolithic.

As has already been mentioned, the bone dagger itself has no broader find context, and it is difficult to attribute it to a particular taxonomic unit, i.e. a culture. However, after examining the cultural periodisation of the Lithuanian Final Palaeolithic, hypothetically, we can attempt to attribute the artefact to a particular culture. A significant number of Final Palaeolithic Swiderian culture sites are recorded in Lithuania, especially in the south and southeast parts of the country (Rimantienė 1996; Girininkas 2009; Šatavičius 1998; 2005a; 2016). Swiderian tanged points are found over a wide geographical extent, from eastern Germany in the west to Ukraine in the east, and as far as the lower reaches of the Daugava in Latvia in the north (Szymczak 1992; Zagorska 1994; Zaliznyak 1995; Sobkowiak-Tabaka & Winkler 2017). However, there is still no direct link between bone and antler products and the Swiderian lith-

ic inventory in the east Baltic. Radiocarbon data from Final Palaeolithic sites in Poland shows that Swiderian culture technology dates from the Younger Dryas and the very beginning of the Preboreal (Schild et al. 1999; Kobusiewicz 2004; Schild 1996; 2014), and despite the lack of local 14C data, this chronology is often applied to Swiderian chronology in the East Baltic as well. The Šarnelė bone dagger would therefore fit into the presumed date range of east Baltic Swiderian culture. This assumption can be supplemented by finds of Swiderian lithics at the Aukštumala, Dreniai and Kalniškiai sites in western Lithuania (Šatavičius 2005b; Rimkus 2019), which indicates that the Swiderians were active in the area. The attempts have also been made to attribute to the Swiderians the stray bone harpoons and reindeer antler axe from Latvia, which are dated to the Younger Dryas and Early Preboreal (Zagorska 2006; 2012; Meadows et al. 2014; Zagorska et al. 2019). Although these finds are of stray origin as well, their dates coincide with the existence of Swiderian technology. The Šarnelė dagger could also be attributed to Ahrensburgian culture, of which morphologically distinguished tanged points are known in several places of southern part of Lithuania (Šatavičius 2016). On the other hand, there is still a lack of firm Ahrensburgian chronology in the east Baltic (Ivanovaitė & Riede 2018), as well as an apparent scarcity of sites in western Lithuania. At present, the dagger's attribution to the Swiderians looks more appropriate, although it should also be borne in mind that the find lacks taxonomic context.

Conclusions

Between 1940 and 1965, stray Stone Age bone and antler tools collection discovered at the village of Šarnelė show that they can greatly contribute not only to the

cultural and technological development of the hunter-gatherer, but also to knowledge of the earliest mobile art in the East Baltic. The bone dagger from Šarnelė dates to the Younger Dryas, and is currently the only directly dated decorated piece of this type from the Final Palaeolithic in Lithuania and, to our knowledge, the entire eastern Baltic. During archaeological field research at Šarnelė settlement in the 20th century, no finds or cultural layer from this period were discovered, but it is evident that there should be much younger Stone Age settlements in the environs of the former Lake Ertenis and the River Varduva, which can provide more data on Final Palaeolithic bone and antler tool manufacture techniques and their use in north-west Lithuania. At present, there is still a lack of clear data on the determination of the species of bone from which the dagger was made, as well as on the individual stages of its production and its actual use. All these research questions will be studied by further investigations into the Stone Age settlements and burials in the Samogitian highland in western Lithuania.

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Abbreviations

ATL – Archaeological Investigations in Lithuania.

FAP – Fontes archaeologici Posnanienses.

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ORNAMENTUOTAS
VERPSTO FORMOS KAULINIS
DURKLAS IŠ ŠARNELĖS –
ANKSTYVIAUSIAS
MEDŽIOTOJŲ-RANKIOTOJŲ
MOBILIOJO MENO PAVYZDYS
LIETUVOJE

**TOMAS RIMKUS,
ADOMAS BUTRIMAS,
MARIUS IRŠĖNAS,
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Santrauka

1940–1965 m., vykdant Varduvo upės vagos ir Ertenio ežero melioracijos darbus Šarnelės kaime, Šiaurės vakarų Lietuvoje, buvo rasta pavienių iš gyvūnų kaulų ir ragų pagamintų įrankių, datuojamų akmens amžiumi (1 pav.). 1973 ir 1981–1982 m. čia buvo atliekami archeologiniai kasinėjimai, kurių metu rasta akmens amžiaus pabaiga – bronzos amžiumi datuojama gyvenvietė su palankiomis organikos išlikimo sąlygomis. 2016 m. pradėti intensyvūs Žemaičių aukštumos akmens amžiaus paminklų ir pavienių radinių tyrimai suteikė progą detaliau panagrinėti Šarnelėje rastus pavienius kaulo ir rago radinius. Verpsto formos ornamentuoto kaulinio durklo (2 ir 3 pav.) datavimas parodė, kad jis priklauso paskutinio driaso laikotarpiui, t. y. 10 569–10 134 cal BC (95 proc. tikimybė) (4 pav.). Šiuo metu Rytų Baltijos regione tai yra ankstyviausias ornamentuotas tokio tipo dirbinys, kuris turi medžiotojų-rankiotojų mobiliojo meno apraiškų. Dirbinys iš abiejų pusių ornamentuotas susikertančių linijų motyvu, kuris suformuoja atskirus trikampus ir rombus (5 ir 6 pav.). Kol kas dar nėra nustatyta tiksli rūšis gyvūno, kuriam priklausė kaulas, tačiau stabiliųjų izotopų duomenys rodytų stambų žolėdį gyvūną, tikėtina, briedį. Chronologiniu požiūriu durklas patenka į bendrą Rytų ir pietryčių Baltijos regiono datuotų finalinio paleolito rago ir kaulo dirbinių kontekstą (7 pav.). Tikėtina, kad pagal savo amžių kaulinis durklas galėjo priklausyti Svidrų kultūros technologijai, kurios gyvenviečių yra aptinkama Vakarų Lietuvoje. Šarnelėje rastas kaulinis durklas ne tik svariai papildo menkus šiuo metu turimus Rytų Baltijos regiono vėlyvojo paleolito kaulo ir rago technologijos duomenis, bet ir suteikia žinių apie ankstyviausią šiame regione žinomą priešistorinį meną.

I

PAPERS READ
AT THE XVIII^o
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