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ARCHEOlogija 46

Lietuvos istorijos institutas

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# ARCHEOlogija 46

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# THE MESOLITHIC CEMETERY OF GROß FREDENWALDE (NORTH-EASTERN GERMANY) AND ITS CULTURAL AFFILIATIONS

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*The site of Groß Fredenwalde was discovered in 1962 and has been known as a Mesolithic multiple burial since <sup>14</sup>C-dates verified an early Atlantic age in the early 1990s. New research since 2012 reconstructed the situation of the poorly documented rescue excavation in 1962 and identified six individuals from at least two separate burials. The new excavations uncovered more burials and Groß Fredenwalde stands out as the largest Mesolithic cemetery in North Central Europe and the oldest cemetery in Germany. In this paper the known burial evidence from this site is presented and the location of the cemetery, mortuary practices, and grave goods are discussed in a broader European context. Northern and Eastern connections appear especially tangible in Groß Fredenwalde and it is suggested that the community associated with the Groß Fredenwalde Mesolithic cemetery was integrated into wider cultural networks connected to the North and East.*

**Keywords:** Mesolithic burials, Mesolithic networks, East-West contacts, mortuary practices, grave goods.

*Gros Fredenvale kapinynas buvo atrastas 1962 metais. 1990 m. grupiniai kapai radioaktyviosios anglies metodu buvo datuoti mezolito laikotarpiu (ankstyvuojančiu atlantišku). Nuo 2012 m. vykdomi archeologiniai tyrimai padėjo rekonstruoti menkai dokumentuotą 1962 m. gelbėjimo darbų situaciją ir nustatė šešis asmenis iš mažiausiai dviejų atskirų palaidojimų. Atlikus kasinėjimus, buvo aptikta ir daugiau palaidojimų.*

*Gros Fredenvale išsiskiria kaip didžiausias mezolito laikotarpio kapinynas šiaurės vidurio Europoje ir seniausias kapinynas Vokietijoje. Šiame straipsnyje pristatoma kapų medžiaga, o informacija susijusi su kapinyno vieta, laidojimo tradicijomis ir įkapėmis, aptariama atsižvelgiant į platesnį europinį kontekstą. Ryšiai tarp šiaurės ir rytų ypač aiškiai apčiuopiami Gros Fredenvale kapinyne, todėl teigiama, kad šis mezolito laikotarpio kapinynas buvo dalis kultūrinio tinklo, jungiančio Šiaurę ir Rytus.*

**Reikšminiai žodžiai:** mezolito kapai, mezolito ryšiai, Rytų–Vakarų kontaktai, laidojimo tradicijos, įkapės.

## INTRODUCTION

In Central Europe, research on the Mesolithic-Neolithic transition is often dominated by discussions on the Neolithisation process, with late

hunter-gatherers and Linear Pottery Culture farmers seen as the prominent agents. During the last decade, this debate has been pushed forward by palaeogenetic evidence which supports the idea of early farmers colonizing Central Europe by c. 5 500–5 400 cal BC

(e.g. Bramanti *et al.* 2009; Hofmanová *et al.* 2016; Czekaj-Zastawny *et al.* 2020). The Neolithisation process in the western Baltic setting in c. 4 200–4 000 cal BC was probably more complex and it is a matter of debate as to what extent migrating farmers might have been responsible for the gradual introduction of farming into northern Germany and southern Scandinavia at that time (e.g. Hartz *et al.* 2007; Müller 2011; Sørensen, Karg 2014; Sørensen 2014; Terberger *et al.* 2018).

Less attention has been paid to the cultural and technological affiliations of late hunter-gatherer-fishers of Central Europe to neighbouring regions in general and to the east in particular. This latter shortcoming is especially due in part to language constraints and increasingly separated research traditions in the later 20<sup>th</sup> century, which has largely inhibited scientific dialogue across borders and political systems. At the same time, archaeological schools prevailing in Central and Western Europe in a somewhat evolutionist way tended to emphasize the influence of the more ‘advanced’ Neolithic communities as opposed to simpler, less innovative hunter-gatherer groups. Innovations such as the introduction of pottery in Ertebølle contexts of the western Baltic by c. 4 700 cal BC were explained as the result of contacts with southern farming communities by scholars such as H. Schwabedissen (1994); that this might have been a hunter-gatherer technology in its own right was not seen as an option.

Rimutė Rimantienė was one of the few scholars at that time who had a wide perspective encompassing both Eastern and Central Europe and she was the one to introduce evidence from the Eastern Baltic into the wider discussion. Her comprehensive overview on the Stone Age of Lithuania (Rimantienė 1994) is still a central publication for all those striving to better understand the Stone Age in the Baltic region and the East-West contacts.

In our contribution we want to take this legacy of Rimutė Rimantienė as a starting point to review

the cultural affiliations reflected in the burial site of Groß Fredenwalde, Brandenburg (NE Germany). Contextualizing our findings within the wider geographical frame, the results contribute to the evaluation and better understanding of the East-West contacts in the Baltic Sea region during the Mesolithic.

## THE BURIAL SITE OF GROß FREDENWALDE

Groß Fredenwalde is located at the top of Weinberg hill next to the village of Groß Fredenwalde in Uckermark (Fig. 1). In 1962, the erection of a sign post on this prominent landmark led to the discovery of skeletal remains (Schoknecht 1963; Gramsch, Schoknecht 2003). Initially, local policemen inspected the site and the same day an amateur collected human bones and some grave goods (complex I). The next day, archaeologist Schoknecht excavated two further skeletons (complex II). A simple drawing shows the inhumation of an adult, probably female, with the skeleton of a child on her abdomen.

Schoknecht (1963) interpreted the ochre-stained skeletons and the few associated animal tooth pendants as the remains of a Neolithic multiple burial. Later, Brinch Petersen (1988) suggested a Mesolithic date for the finds in his publication of the multiple burial of Strøby Egede on Zealand (Denmark) which he dated to the middle Ertebølle culture (c. 4 800 cal BC). Some years later a Mesolithic date was confirmed for the Groß Fredenwalde remains by first radiocarbon dates (Hedges *et al.* 1995). They assigned the individuals to an early Atlantic context (c. 6 500–6 300 cal BC). A thorough re-assessment of the 1962 rescue excavation and its results was published by Gramsch and Schoknecht (2003) and later Gramsch provided a comparative discussion of the site within its wider East German framework (2016).

New research started in 2012, during which the 1962 construction pit was re-excavated step by

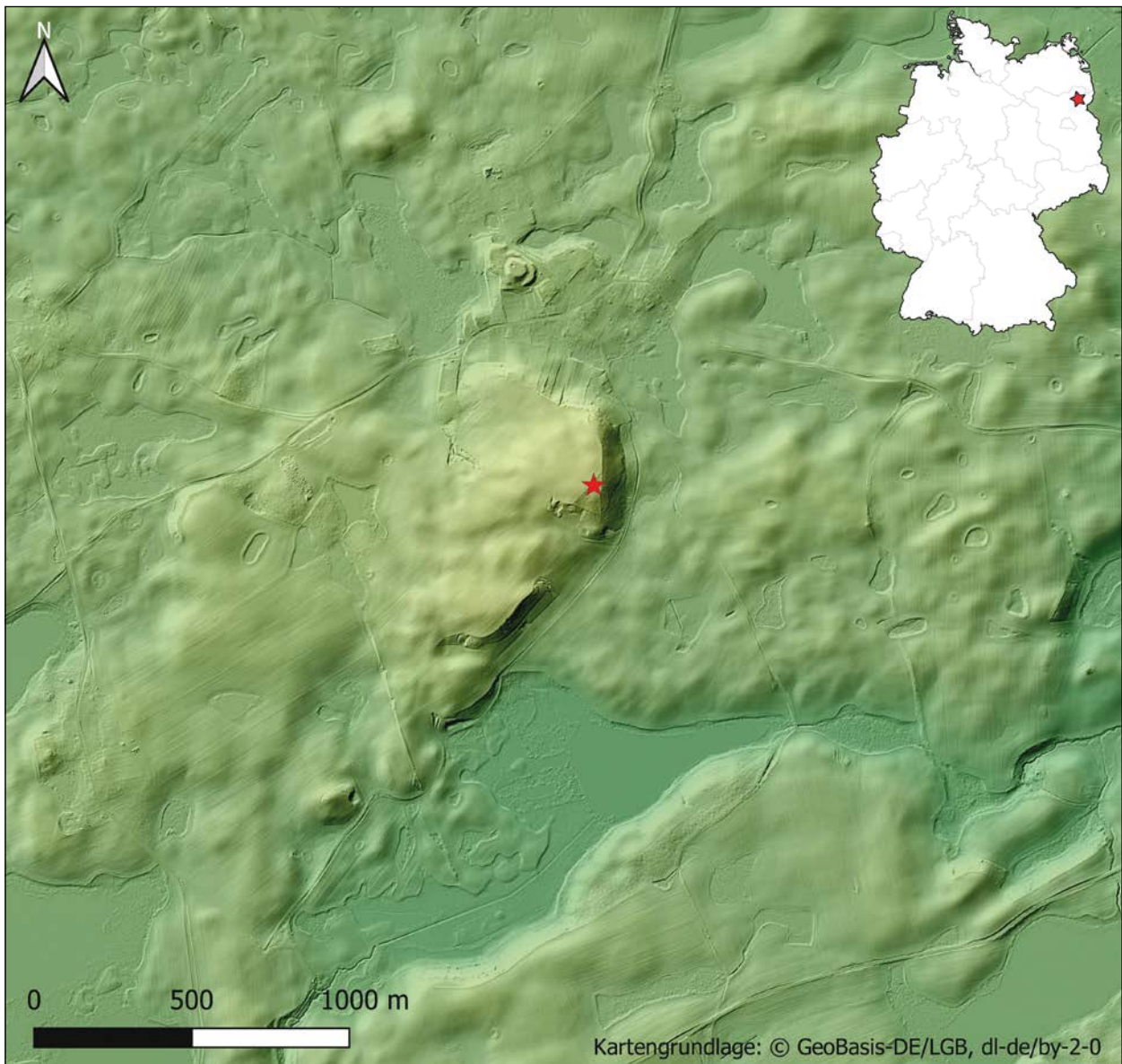


Fig. 1. Location of the GroÙ Fredenwalde site in the landscape of Uckermark (Brandenburg, NE-Germany). Drawing by A. Kotula.

step. A systematic analysis of the human remains found in 1962 allowed for the identification of six individuals (Jungklaus *et al.* 2016). The skeletal remains from 1962 had become mixed up after the rescue excavation and only part of the bones could be reliably assigned to specific individuals. Altogether, three adults, (Komma) two male and one female (individuals 1–3) as well as three children

(individuals 4–6) were identified. Grave goods associated with the 1962 burials included about 31 flint blades, two transverse arrowheads, fragments of a slotted bone dagger, and 86 animal tooth pendants (Gramsch, Schoknecht 2003; Terberger *et al.* 2015). Five animal tooth pendants were still attached to a skull at the time of discovery; they can be attributed to the headdress of a 3–4 year-old



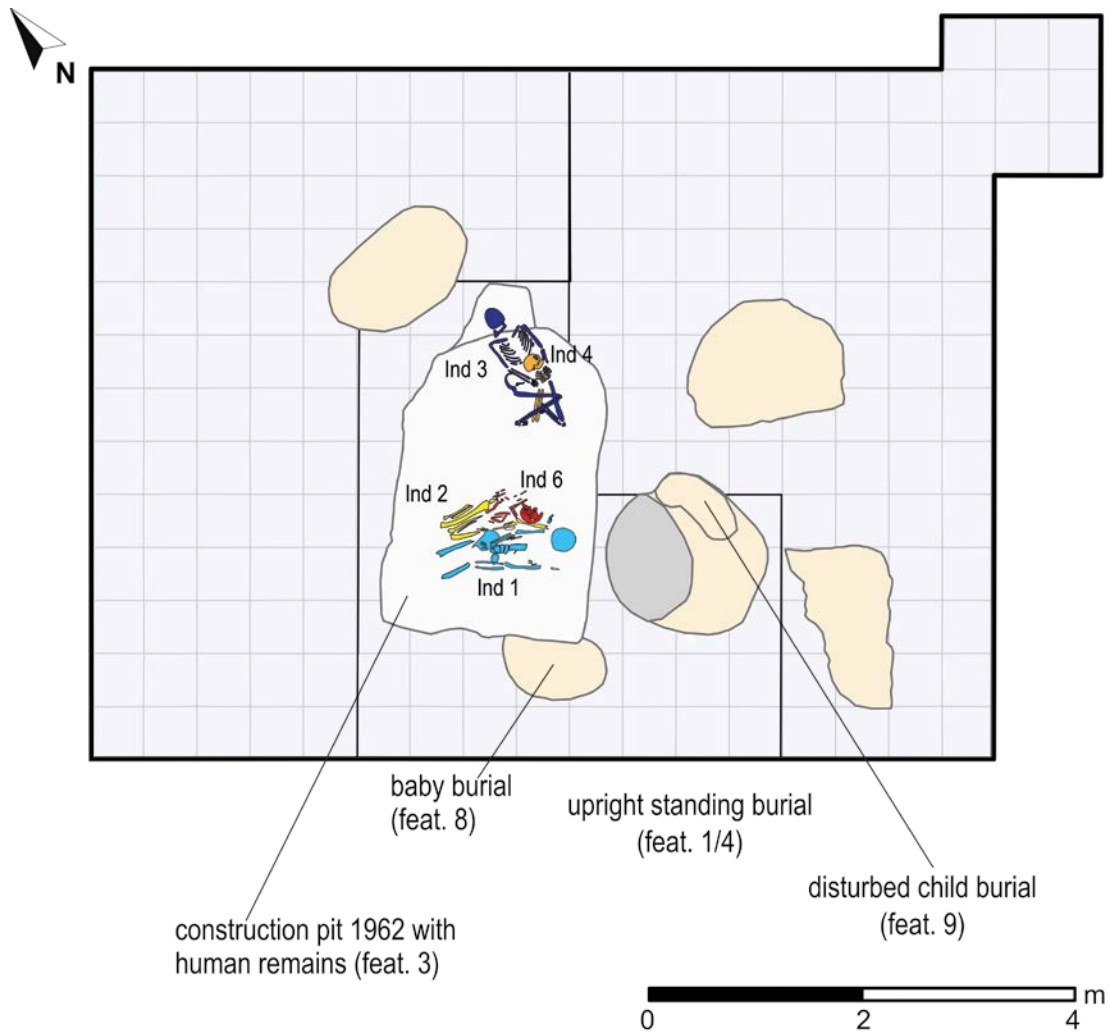


Fig. 2. Groß Fredenwalde. Plan of the excavation with different features including the 1962 burials (complex I and II). Drawing by A. Kotula.

child (individual 6). The bone dagger as well as most of the flint blades and two transverse arrowheads might have been connected to one of the males (individuals 1 or 2). Three more animal tooth pedants were lying close to the skull and another four near the leg bones of the female (individual 3) who was excavated on the second day in 1962 with a child on her abdomen (probably individual 4). A bone pin was associated with this inhumation. The  $^{13}\text{C}$ -/ $^{15}\text{N}$ -values of all six individuals suggest a regular intake of aquatic resources (Terberger *et al.* 2015; 2018).

Photographs found in the archive of the State Service for Cultural Heritage of Brandenburg recently allowed for a more comprehensive understanding of the situation discovered in 1962. Gramsch and Schoknecht (2003) interpreted the finds as a single multiple burial (see also Gramsch 2016). However, freshly interpreted archival information in combination with systematic radiocarbon dating results suggest the situation originally found in the pit during rescue excavation in 1962 was more complex (Terberger *et al.* in press): 1) The double burial of a man (individual 2) with flexed legs and a young child

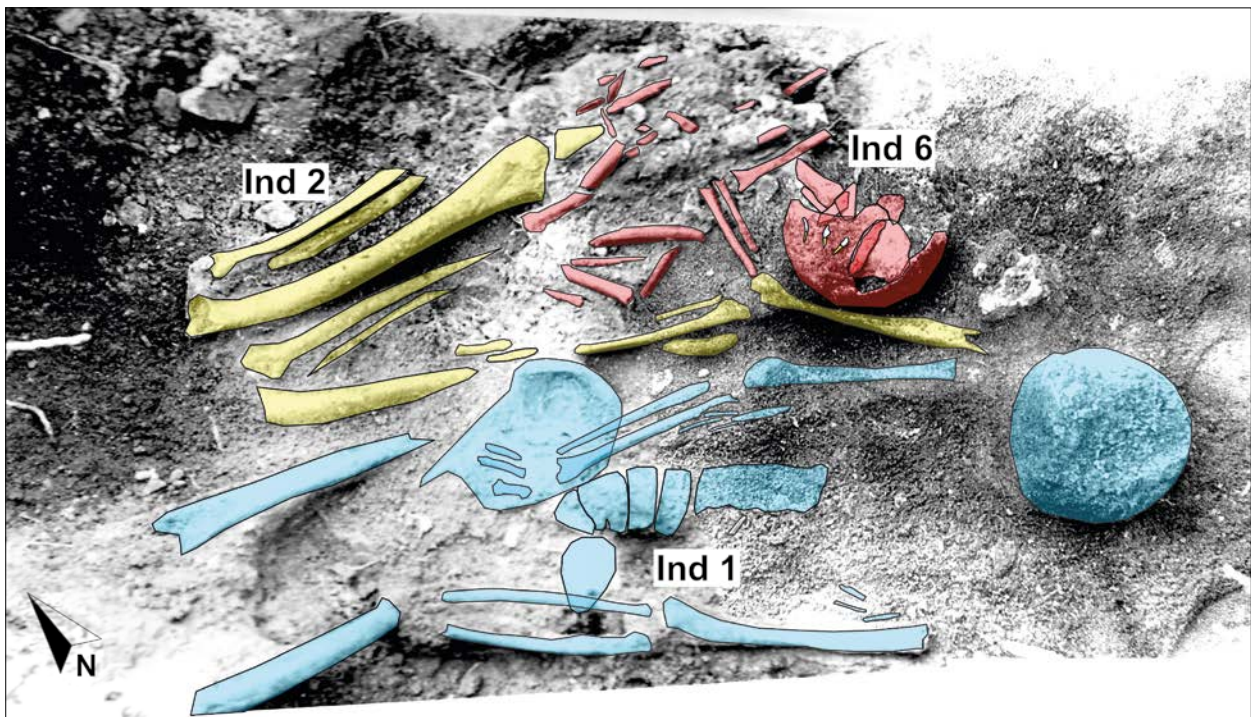


Fig. 3. Remains of individuals (complex I) marked on the photo made in 1962 on the first day of the discovery. Photo by Brandenburgisches Landesamt für Denkmalpflege; modified by A. Kotula.

lying on his abdomen (individual 6) is visible on the photo (Fig. 2–3). These individuals have been dated to c. 6 200–6 000 cal BC.<sup>1</sup> 2) The man in the supine position (individual 1) is lying right beside individual 2. A direct date of c. 5 900–5 730 cal BC might indicate a slightly later context for this burial event, although differences in the age offsets connected to the reservoir effects of the neighbouring individuals (no. 1 and 2) could also be responsible for the considerable dating difference. 3) The 7–8 year-old child (individual 5) is not present on the photos or the drawing of the second day. It might belong to the double burial mentioned before, but it seems also possible that a separate child burial dated to c. 6 100–6 000 cal BC was destroyed on the first day of the rescue excavation. 4) About 1 m to the east of the described inhumation (= complex I),

the double burial of a woman and a child was found (individuals 3–4; complex II), showing a somewhat different orientation. Radiocarbon dates suggest a slightly younger context of c. 6 100–5 840 cal BC for this double burial.

In conclusion, according to this new interpretation of the remains found in 1962, we are dealing with at least two separate multiple burials, complex I and complex II, which are clearly separated spatially and which are also distinguished by their different orientation (Fig. 2). A male (individual 1) in complex I provided a slightly younger radiocarbon age than the other individuals of this complex, which could either be due to inconsistent reservoir age offsets between the individuals, or due to a separate, later inhumation.

<sup>1</sup> Some reservoir effects should be expected for the AMS dates of human bones and therefore only estimates can be given here for the dating. The AMS-dates of the two animal tooth pedants were the most reliable and provided almost identical dates of c. 5 970 cal BC (Terberger *et al.* 2015). For a discussion of reservoir effects in human bone dates from northern Germany see e.g. Olsen *et al.* 2010; Fernandes *et al.* 2015.

## NEW RESEARCH REVEALS THE LARGEST CEMETERY ON THE CENTRAL EUROPEAN PLAIN

The results of the re-assessment suggest that probably two or three burials with six individuals dating to the period from c. 6 200 to 5 730 cal BC<sup>2</sup> were discovered in 1962. Ongoing new research confirms that the discoveries of 1962 do not stand alone but are part of a larger burial site with further individuals and more complex burials (Terberger *et al.* 2015). Directly neighbouring the original 1962 pit, the burial of a small child about one year old was found in red-stained sands (feature 8). According to a radiocarbon date of c. 6 430 cal BC, it might be somewhat older than the inhumations mentioned before (Jungklaus, Terberger 2016).

Most interesting is another burial complex with two individuals interred with a time difference of roughly 1 000 years. Initially, a roughly 8–9 year-old child (feature 9) was buried around 5 940 cal BC. Most of this burial was destroyed by the later burial of a roughly 25 year-old man, which left only the bones of the right foot of the child in their original position. The later inhumation (feature 1/4) in a pit about 1.6 m deep was placed directly through the older burial. During the excavation, the first feature identified was a fire place directly below the plough horizon. Underneath this fire place, most of the human bones were found in a mixed position (Fig. 4). Only parts of the spine and the leg bones had remained in or close to their anatomically correct position (Fig. 5; Terberger *et al.* 2015). The interpretation of the feature suggests a sequential burial rite: In a first step, the body of the man was apparently placed in an almost upright position, only the lower part of the pit around the legs being filled with sand. Some gnaw marks

from scavengers on two arm bones as well as the missing left ulna and radius indicate that the burial pit had remained unsealed or preliminarily sealed for a while. This is supported by the observation that the skull and further bones of the upper body had fallen into the pit after decomposition. Only the leg bones had remained more or less close to their original upright position, although the knees were bent to the backside. In a further step, the burial was then filled in and sealed by a fire lit on top of the pit, directly above the skull. Grave goods such as two truncated blade knives, 32 flint blades, a small hammer stone, and two bone pins were found intermixed with the bones. While the other burials show evidence of the use of red ochre in the burial rite, no red-stained sands were associated in this young male's unusual burial. An AMS date for a bone sample from this individual dates this burial to c. 5 100 cal BC. An elevated <sup>15</sup>N-value of 11.3 ‰ renders aquatic reservoir effects possible in connection with this date and the two dates for charcoal samples from the fire place are probably more reliable. They indicate a date of c. 4 900 cal BC for this burial (Terberger *et al.* 2015).

Recently, further features were detected at Groß Fredenwalde and work is in progress to document these new burials. In summary, more than ten human individuals in a minimum of eight burials can currently be assigned to the cemetery. According to the radiocarbon dates, the main phase of the burial site covers a period from c. 6 400 to 5 800 cal BC. Most of the AMS dating samples stem from human bones and if aquatic reservoir effects of up to a couple of hundred years are taken into consideration, the true age of the period of the cemetery's use might have been somewhat later and shorter. Further AMS dates of grave goods, especially from the closed burial contexts, are planned in order to better address this problem

<sup>2</sup> This chronology is based on radiocarbon dates not corrected for reservoir effects; the true age of the burial events might be younger. However, the two dates from the animal tooth pedants prove the presence of burial activities around 6 000 cal BC (see footnote 1; Terberger *et al.* 2015).



Fig. 4. Groß Fredenwalde. Feature 1/4 with the human remains of a young male roughly 25 years old in a mixed position under a fire place. *Photo by A. Kotula.*

by pairing the dates from the human remains and the terrestrial animal bones. The burial of the young male interred in an upright position (feature 1/4), however, can be safely attributed to a more recent phase (c. 4 900 cal BC), a period when early Linear Pottery Culture farmers had already founded settlements in the vicinity.

Linear Pottery Culture finds and settlements a few kilometres to the northeast of Weinberg prove that the local fertile soils attracted early farming communities and from c. 5 200 cal BC on, late hunter-gatherer-fishers probably lived parallel to and in contact with colonizing early farmers in this region (Ismail-Weber 2017). It is therefore likely that the young man buried in an upright position (feature 1/4) c. 4 900 cal BC had had personal contact with members of the early farming communities. His  $^{15}\text{N}$  isotopic value, however, corresponds to the values

of the Mesolithic individuals buried at this site roughly 1 000 years earlier, which indicate regular consumption of fresh water resources. The presence of his burial in an old Mesolithic cemetery might also indicate that his community was aware of the former meaning of the site and was rooted in a hunter-gatherer-fisher way of life.

The water rich environment of Havelland and Uckermark must have been attractive for the Mesolithic population. At the same time, fertile soils along the lower Oder provided suitable conditions for early farming communities. Against this background there are excellent conditions to study the relationship of these very different life styles at a time before and after Neolithisation.

In the supraregional context of the Mesolithic burial record, Groß Fredenwalde stands out due



Fig. 5. Groß Fredenwalde. Feature 1/4 with the leg bones of the young male close to their correct anatomical position. *Photo by T. Terberger.*

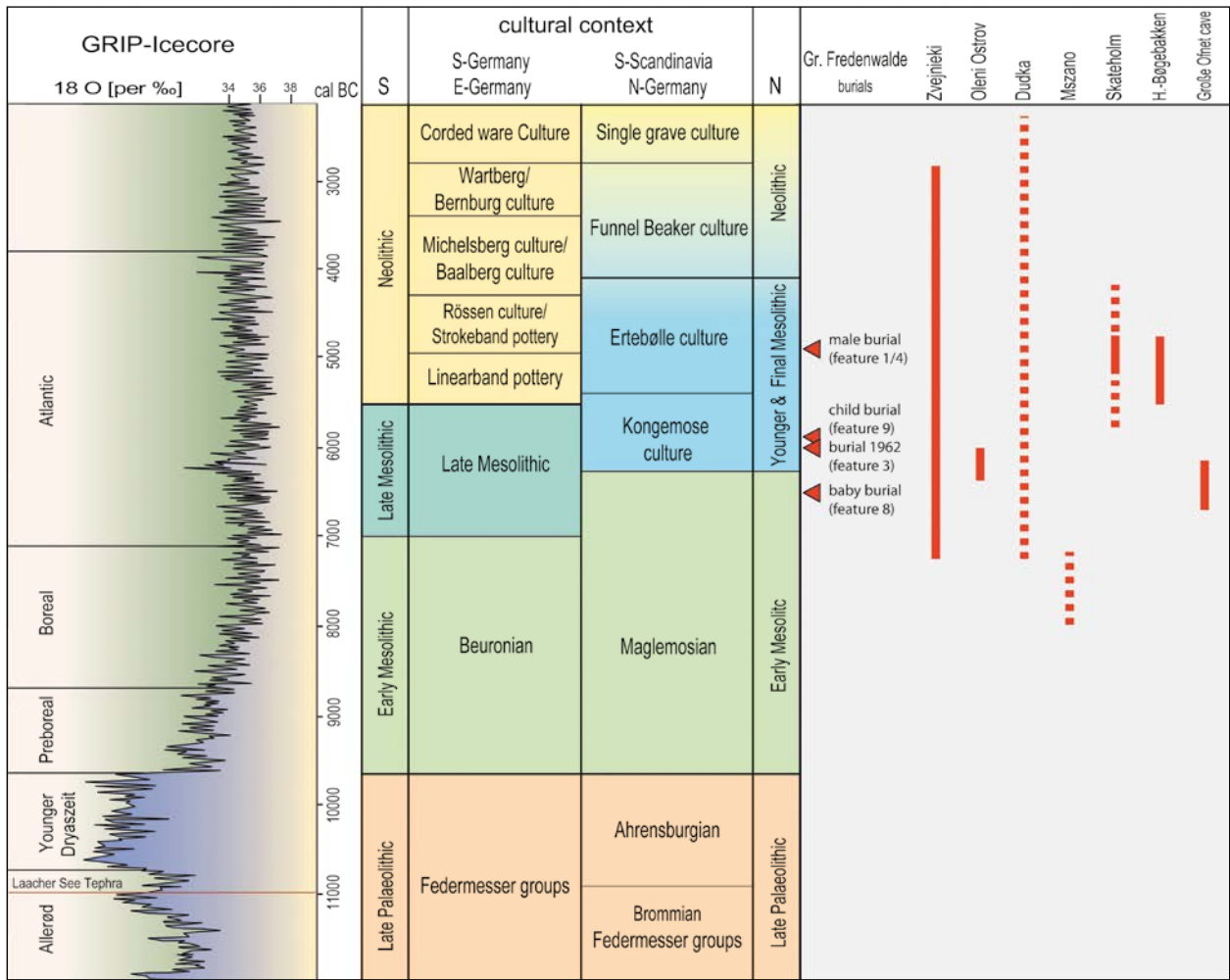


Fig. 6. Chronology of the Mesolithic-Neolithic in North Central Europe with the dating of Groß Fredenwalde and other important burial sites. Solid line: dated by a series of radiocarbon dates; dotted line: estimated period by isolated radiocarbon dates or other evidence. *Compiled by T. Terberger and A. Kotula.*

to its considerable number of inhumations. The evidence from Eastern Europe suggests a tradition of Mesolithic cemeteries starting in the early Mesolithic, while most of the Mesolithic cemeteries in Scandinavia are dated younger (Fig. 6). Although even the term cemetery has been challenged for burials in settlements like Henriksholm-Bøgebakken, the general picture is biased by the better visibility of younger Mesolithic sites in Scandinavia (Brinch Petersen 2015, p. 159). From Central Europe very few candidates for Mesolithic cemeteries can be mentioned; Groß Fredenwalde provides the largest

burial population among them. Only the Große Ofnet cave in Bavaria, Southern Germany, where the heads of more than 30 individuals dating to the early Atlantic were deposited, shows a larger number of Mesolithic individuals. Some of the skulls show signs of trauma (Orschiedt 2015) and it is a matter of discussion if these skulls represent the remains of the regular inhumations of a group. It might well be the case that the skulls were the victims of a single violent event and cannot be considered a true cemetery.

No Mesolithic inhumation burial site in Germany besides Groß Fredenwalde has yielded more than

four individuals. A recent re-examination of four individuals from Bottendorf in Thuringia revealed that one skeleton from a presumed ‘double burial’ in fact dates to the Bronze Age (Grünberg *et al.* 2016). The site of Mszano (Poland) located east of the river Vistula yielded six individuals from five burials with traces of cremation (Marciniak 2001). Due to the poor bone preservation, only samples from the burnt wooden structures of the burial features could be radiocarbon dated and suggested a Mesolithic context in the Boreal period. If the dates can be accepted as also valid for the burials themselves, then the site should be considered the oldest cemetery in Central Europe. Two child burials from Bettenroder Berg, Lower Saxony, suggest a need to be cautious with the indirect dating of such skeletons: each of the burials was originally assigned to the Mesolithic on the basis of a radiocarbon date for charcoal samples from the burial pits. Direct dating of the two skeletons later assigned the two burials to an Iron Age context (Grote, Terberger 2011). According to Meiklejohn *et al.* (2009), a Mesolithic cemetery should be represented by a minimum of nine individuals. Using this definition, Groß Fredenwalde is the largest and probably oldest cemetery in Central Europe.

## GROß FREDENWALDE WITHIN WIDER LATE MESOLITHIC NETWORKS

### The cemetery and its location

The Mesolithic cemetery at Groß Fredenwalde is part of a wider phenomenon of the intensified occurrence of formal disposal areas of mortuary remains, i.e. cemeteries, observable across Europe in the Later Mesolithic. This phenomenon extends from the Atlantic coast (cemeteries of the Muge estuary, Portugal; Tévéc and Hoëdic, Brittany) across South-Eastern Europe (cemeteries at the Iron Gates Danube gorge, Serbia, and Romania), and Southern Scandinavia (e.g., Vedbæk-Bøgebakken, Denmark;

Skateholm, Sweden) into the Eastern Baltic (e.g., Zvejnieki, Latvia; Spiginas and Donkalis, Lithuania), Karelia, and the Russian Plain (e.g., Oleni Ostrov and Minino, Russia). In respect to the more general patterns in hunter-gatherer anthropology, this intensification in structured mortuary practices can be understood as connected to an increased territoriality and associated economic intensification, e.g. in the exploitation of aquatic resources (Nilsson Stutz 2014). Similar developments can also be noted among prehistoric hunter-gatherers in other parts of the world, e.g. in Japan (Matsumoto, Habu 2017), Transbaikalian Siberia (Weber, Bettinger 2010), and the near East (Byrd, Monahan 1995).

Structurally connected to the increased territoriality is the frequent location of the mortuary sites at elevated or otherwise prominent locations. The famous cemetery of Oleni Ostrov in Karelia, for example, occupies an island in Lake Onega, the Lithuanian sites of Donkalis and Spiginas are likewise located on islands, and the Hoëdic and Tévéc burial sites in France were located at prominent high points at the coastal plain in the Mesolithic (Schulting 1996, p. 336); later hunter-fisher burial sites of communities existing parallel to farmers also fit this rule (e.g., Ostorf, Germany; Lübke *et al.* 2007). Firmly entwined in the enculturated landscapes with their webs of meaning, history, and significance, the cemeteries can be regarded as transition places in the cosmology of the local hunter-gather groups, as has also been suggested for other locations, e.g. Oleni Ostrov and Skateholm (cf. Nilsson Stutz 2014, pp. 720–721). Within the (mobile) lifestyles, they would have served as territorial focus points for social entities.

Groß Fredenwalde, with its occupation of the highest rise in the region, is an impressive example for this pattern (see Fig. 1). Until now there is no evidence of an adjacent contemporary Mesolithic settlement in Groß Fredenwalde and it is likely that the morainic hill was an area reserved especially for ritual activities. The distinguished elevated position of

the Groß Fredenwalde site indicates a territoriality of a forager group and the authors suggest the existence of a nearby stable settlement network belonging to this group. The territoriality of late hunter gatherers in this region is especially worth investigating as early LBK farmers moved into fertile Uckermark soils from the late 6th millennium onwards and the upright male (feature 1/4) buried here was possibly a resumption of a territorial hunter-gatherer tradition.

The two phases of use of the Groß Fredenwalde Weinberg hill for hunter-gatherer burials (1: late 7<sup>th</sup>/early 6<sup>th</sup> millennium cal BC; 2: early 5<sup>th</sup> millennium cal BC, currently represented by only one burial) resembles the situation at the two island cemeteries of Donkalnis and Spiginas in Lithuania, where an initial burial phase around 6 000 cal BC was followed by a hiatus of roughly one thousand years before further burials took place. In contrast, even larger Mesolithic cemeteries seem to be restricted to a shorter period of use, as has been recently demonstrated for Oleni Ostrov (Schulting 2019). Here, a connection with the 8.2 ka climatic cooling event is taken into consideration as a possible trigger for related socio-cultural and economic change, and the chronological position of the earlier phase of the Groß Fredenwalde cemetery broadly fits such a scenario, too. The Latvian site of Zvejnieki is an exception here with its longer history of hunter-gatherer burials (Larsson, Zagorska 2006).

### Mortuary practices

Parallels have been drawn between the Groß Fredenwalde discovery of a multiple and a double burial with burials from Southern Scandinavia (Brinch Petersen 1988; Gramsch, Schoknecht 2003), but such instances are not exclusively connected with the Mesolithic of the North. Mesolithic double and multiple burials are not frequent, but nonetheless they are regularly encountered in cemeteries and also as isolated burials across Europe (Grünberg 1996; Törv 2018, pp. 214–222). Sites with such burials include e.g.

Henriksholm-Bøgebakken in Denmark, Zvejnieki in Latvia, and Oleni Ostrov in Russia, but also sites in Western Europe in Tévéc, France, and the shell midden in Moita de Sebastião, Portugal. While the famous multiple burial at Strøby Egede, Denmark, is known as a single burial feature, it had also been part of the larger, now destroyed, Ertebølle cemetery (Brinch Petersen 1988). The death of two or more persons at the same time is an exceptional event that can be due to several reasons. There are certainly double or multiple burials where trauma or weapons point to the violent death of those individuals at the same time. More typical are double and multiple burials where an anthropological analysis is unable to detect any cause of death, which could have been the result of an infectious disease, famine, or certain types of accidents.

Mesolithic burial sites and cemeteries across Europe are characterized by a wide variety of different body positions and orientations: supine, crouched and sitting positions, and prone inhumations are frequently encountered (e.g. at Skateholm, Sweden; Oleni Ostrov, Russia), sometimes even supplemented with cremations (Nilsson Stutz 2014; Grünberg 2016). At Groß Fredenwalde, the prevailing body position of the adults seems to have been supine while slightly leaning to the left with strongly crouched legs (Fig. 2–3); upper legs extended downwards, calves are bent. The only clear exception is the later burial of the young man (feature 1/4) in an upright position, which is connected with a complex, multi-phase burial rite. The closest parallels for such an unusual body placement can be found at Oleni Ostrov where four individuals were placed in the grave pits in a near-vertical position, among them also the burial with the richest grave goods (burials 68, 100, 123, 125; Gurina 1956, p. 31; O’Shea, Zvelebil 1984). While these parallels between the famous Karelian hunter-gatherer cemetery and Groß Fredenwalde are striking, a direct comparison is hindered by the chronological difference of roughly 1 000 years.



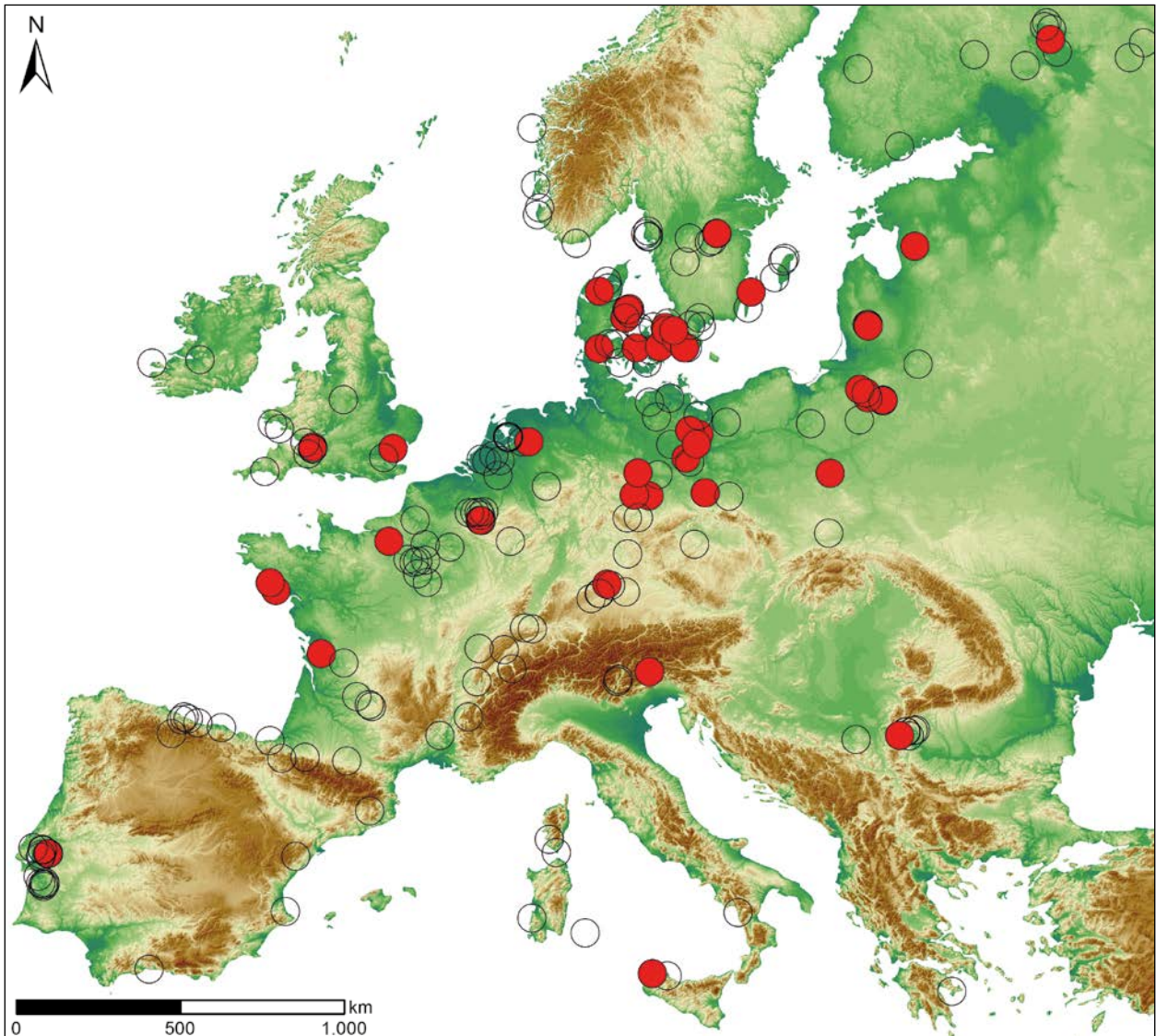


Fig. 7. Flint blades in Mesolithic burials (red=present; transparent=absent). *Drawing by A. Kotula.*

In most of the Groß Fredenwalde burials, ochre was part of the ritual and the pigment is considered typical for Mesolithic burials (Grünberg 2000). Ochre was commonly used in Northern and Eastern Europe and the large cemeteries at Zvejnieki and Oleni Ostrov are prime examples of the abundant use of ochre in burials. In Western Europe, ochre was also used, e.g. at the Breton sites of Tévéc and Hoëdic, but to a much lesser degree (Grünberg 2000, pp. 144ff). Ochre is also a common feature in Mesolithic burials found in

Eastern Germany, e.g. Bad Dürrenberg and Schöpsdorf, while in Southern Germany, only the skull depositions from Große Ofnet and Kaufertsberg bear traces of this pigment (Grünberg 2000; Orschiedt 2015).

### Grave goods

Regional identities can be reflected in grave goods. The homogeneity of animal tooth pendants from Groß Fredenwalde is remarkable: of the 86



Fig. 8. Groß Fredenwalde. Two truncated blades found in association with the human remains of a young male (feature 1/4). Photo by A. Kotula.

pendants 41 have so far been identified and all are from red deer. Naturally, the species of tooth pendants is determined by the regional environment and in Eastern Europe, elk, bear, and beaver are especially frequent (e.g. at Oleni Ostrov: Gurina 1956, pp. 134–142). The distribution of red deer pendants, on the other hand, is densest in Southern Scandinavia, but the discovery of such pendants at sites from the Atlantic coast (Téviec and Hoëdic) to the Eastern Baltic (e.g., Donkalnis and Spiginas, Lithuania) attests to their wider distribution (Butrimas 2016). In the Mediterranean and the Atlantic coast, adornments are dominated by shell pendants (Grünberg 2000, p. 118). Due to the specific excavation circumstances at Groß Fredenwalde many of the tooth pendants cannot be attributed to specific individuals. However, the adornment of the head of one of the children



Fig. 9. Groß Fredenwalde. Fragments of a slotted bone dagger probably found with the human remains of complex I in 1962 (after Gramsch, Schoknecht 2003).

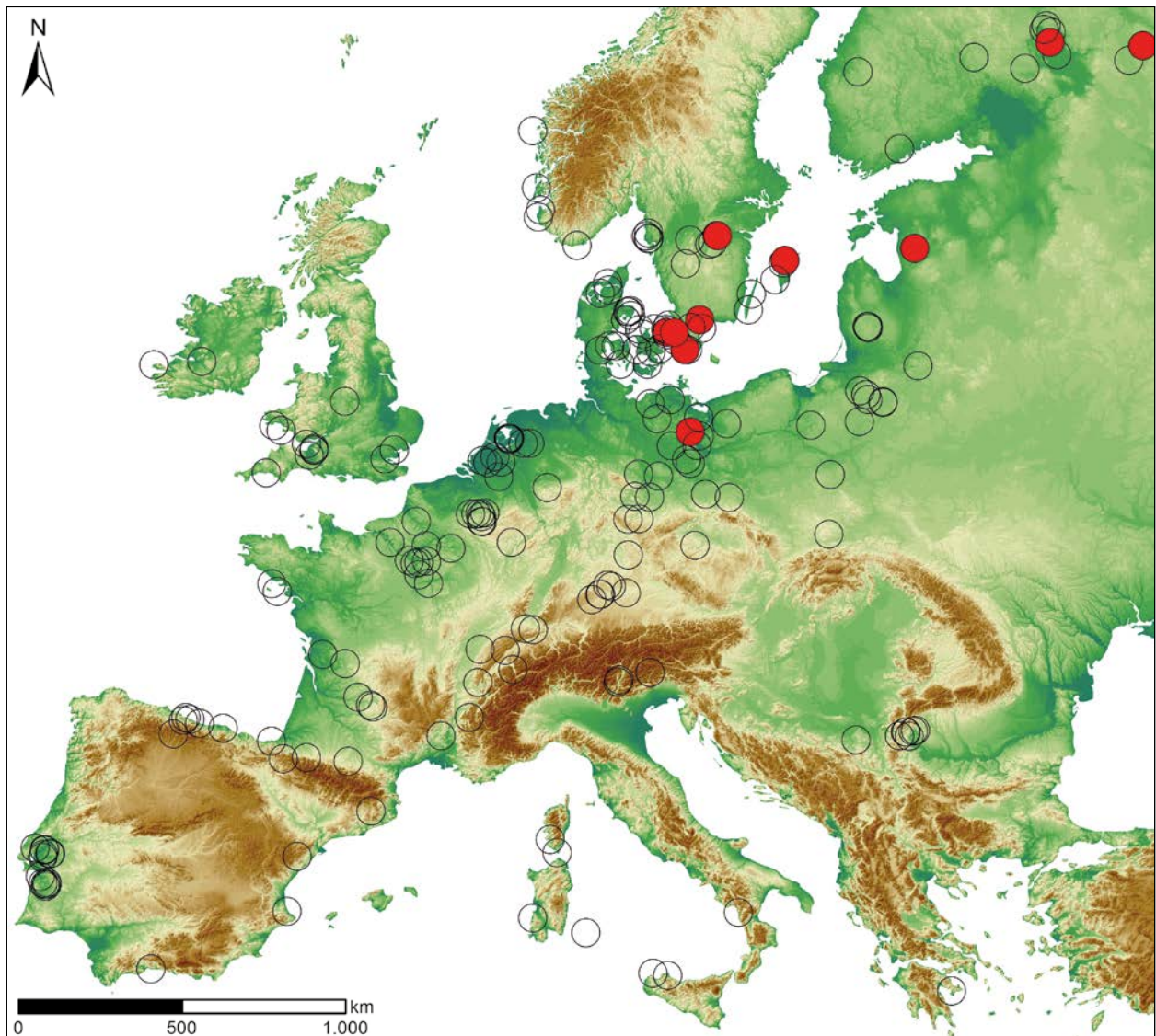


Fig. 10. Slotted bone tools / daggers in Mesolithic burials (red=present; transparent=absent). *Drawing by A. Kotula.*

(individual 6) with a row of tooth pendants has been recorded in a photo. Such an arrangement indicating decorated headgear has parallels e.g. further east at Donkalnis, Lithuania, and the Karelian site of Oleni Ostrov (Butrimas 2016, p. 210).

While the distribution of flint blades as grave goods in Mesolithic burials is broad, ranging from the Iberian Atlantic coast in the west to Karelia in the East, the flint-rich area of Southern Scandinavia and parts of Northern and Central Germany are especially

well represented. This may hint at contacts between the Southern Baltic Coast and the continental plains further south (Fig. 7). The presence of large truncated blades (knives) as grave goods has been especially reported from Danish sites such as Henriksholm-Bøgebakken and Strøby Egede (Albrethsen, Brinch Petersen 1976; Brinch Petersen 1988), but parallels have also been mentioned from sites like Bottendorf in Germany (Albrethsen, Brinch Petersen 1976). Truncated flint blades in Eastern German burials

often represent larger specimens that are roughly 1.5–2 cm in width. In Groß Fredenwalde two truncated blades of remarkable size (Fig. 8) were associated with the individual buried upright (feature 1/4). A non-local origin can be expected for at least the 3.2 cm wide specimen, which may well have been imported from northern flint sources, e.g. Rügen Island.

Another grave good possible to discuss here is a fragmented slotted dagger with some decoration that was found at Groß Fredenwalde in 1962 (Fig. 9). Slotted bone tools with flint insets are a rare but well defined Mesolithic artefact type with a main distribution in the Northeast. The specimen found at Groß Fredenwalde marks the south-western limit of the distribution of this tool type in burials (Fig. 10), which confirms an integration of the site into a north-eastern network. Apart from a cluster in southern Scandinavian, this artefact type occurs in burials in the Eastern Baltic, across Karelia, and into the far Northeast of Europe. There is also a chronological trajectory within this distribution pattern if the radiocarbon dates from these sites are compared, suggesting a dispersal of slotted bone tools with microblade insets from East to West.

### CONCLUSIONS – NORTHERN AND EASTERN CONTACTS IN THE ATLANTIC PERIOD

A preliminary evaluation of the Groß Fredenwalde Mesolithic cemetery indicates its integration into wider cultural networks connected to the North and East. This is reflected, for example, in the grave goods. Analogies for the headdress with animal tooth pendants belonging to a child (individual 6) can be found in eastern Mesolithic burials (see above). The slotted bone tool dated to c. 6 000 cal BC finds parallels in southern Scandinavia and north-eastern Europe. Slotted bone artefacts and the related microblade technology have their origin in Eurasia and this technology spread from the Eastern

European Plain into the western Baltic in the Early Atlantic period (Hartz *et al.* 2010; Sørensen *et al.* 2013; Gronenborn 2017; Apel *et al.* 2018). In accordance with this, trajectories have been put forward for the Late Mesolithic with the identification of the East-West dispersal of forager pottery, which reached the Southern and western Baltic in the Early Atlantic period (e.g. Piezonka 2015; Jordan *et al.* 2016; Kotula 2017) and it has become clear that Mesolithic innovation processes in North Central Europe were repeatedly driven by Eastern impetuses.

The youngest burial at Groß Fredenwalde dates to c. 4 900 cal BC with the unusual burial rite involving an upright body position also having its closest parallels in the East. However, the four burials with a similar body position at the site of Oleni Ostrov are hundreds of years older and, therefore a direct affiliation seems questionable. It might rather represent a more general reflection of the stark diversity in body positions and mortuary rights that characterize hunter-gatherer burials in Late Mesolithic Europe, with a possible affiliation to specific Eastern traditions. At the same time, there is little doubt that the large truncated flint blades of the upright burial (feature 1/4) strongly suggest direct contacts with the coastal area about 100 km to the North and the network that existed at that time in the western Baltic Ertebølle Culture.

While these northern and eastern connections appear especially tangible in Groß Fredenwalde, the site was supposedly also affected by underlying, more general communication and innovation networks in the Mesolithic, expanding in longue durée processes from the Northeast. The Groß Fredenwalde Mesolithic cemetery is located on the south-western periphery of this influence network and ongoing archaeological, anthropological, and palaeogenetic research will help to further disentangle the complex amalgamation of north-eastern Mesolithic innovation processes with the incoming Southern farming groups in the Northern lowlands.

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## GROS FREDENVALDE (ŠIAURĖS RYTŲ VOKIETIJA) MEZOLITO LAIKOTARPIO KAPINYNAS IR JO KULTŪRINĖS ŠAŠAJOS

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### Santrauka

Gros Fredenvalde kapinynas atrastas 1962 metais. 1990 m. radioaktyviaja anglimi atlikti tyrimai patvirtino, jog žmonių palaikų amžius siekia mezolito laikotarpį. Tyrimai buvo atnaujinti 2012 m.: nuosekliai kasinėta 1962 m. tirta duobė. Taip pat buvo atlikta sistemiška žmonių palaikų, rastų 1962 m., analizė, identifikuoti šeši asmenys. Su šiais palaidojimais siejamos įkapės – titnaginės skeltės, skersiniai strėlių antgaliai, sudėtinio tipo durklo fragmentai ir žvėrių dantų pakabukai. Negana to, archyvuose buvo aptikta nuotraukų iš tų pačių metų – jos taip pat žymiai prisidėjo prie visapusiškesnio medžiagos supratimo. Šioje medžiagoje matyti mažiausiai du grupiniai palaidojimai, aiškiai išsiskiriantys tiek erdviškai, tiek pagal kapų orientaciją.

Besitęsiantys tyrimai patvirtina, kad 1962 m. radiniai yra dalis kapinyno su kitais – pavieniais ar grupiniais – kapais. Kapas, kuriame apipiltas ochra palaidotas vienerių metų vaikas, rastas greta 1962 m. tirtos duobės (datuojamos apie 6430 cal BC).

Kitame kapų komplekse rasti dviejų žmonių, palaidotų tūkstančio metų intervalu, kapai. Vienas – maždaug 8–9 metų vaikas (apie 5940 cal BC). Tačiau didžioji dalis šio kapo buvo suardyta vėlesnio palaidojimo: apie 4900 cal BC toje vietoje iki pusės, atliekant nuoseklius ritualus, stačiomis buvo užkastas apie 25 metų amžiaus vyras. Pastaruoju metu buvo aptikta ir daugiau palaidojimų, taigi šiuo metu vyksta jų fiksavimo darbai.



Apibendrinant galima teigti, kad Gros Fredenvalde kapinynui priskiriami daugiau nei dešimt asmenų mažiausiai iš aštuonių kapų. Radioaktyviosios anglies datavimas rodo, jog pagrindinis kapinyno naudojimo laikotarpis tęsėsi 6400–5800 cal BC. Iki šiol nerasta jokių įrodymų šalia buvus vienalaikę gyvenvietę. Dėl to svarstoma, kad ši moreninė kalva buvo naudojama tik ritualinėms veikloms.

Mezolito laikotarpio laidojimo vietos ir kapinynai Europoje pasižymi tuo, kad mirusieji būdavo laidojami įvairiomis pozicijomis ir kryptimis. Gros Fredenvalde kapinyne palaikai dažniausiai guldyti aukštiekninki, šiek tiek pasukti į kairę, suglaustomis suriestomis kojomis. Vienintelė išimtis – anksčiau minėtas jauno vyro palaidojimas stacioniais. Dar vienas analogiškas palaidojimas buvo rastas Olenij Ostrovo vietovėje.

Regioninės tapatybės atspindžiai matyti įkapėse. Štai Gros Fredenvalde kapinyne rastos dvi neįprastai didelės nulaužtos skeltės siejamos su stacioniais palaidotu asmeniu ir, manoma, galėjo būti importuotos iš titnago turtingų vietovių Šiaurėje, pvz., iš Riugeno salos. Sudėtinio tipo kauliniai įrankiai su titnaginiais ašmenėliais yra retas, tačiau būdingas mezolito laikotarpiui dirbinių tipas, daugiausiai paplitęs Šiaurės Rytuose. Pavyzdys rastas Gros Fredenvalde kapinyne žymi pietvakarinę šių įrankių, randamų kapuose, išplitimo ribą.

Preliminarus Gros Fredenvalde mezolito laikotarpio kapinyno vertinimas rodo jį buvus dalimi platesnių kultūrinių ryšių, jungiančių Šiaurę su Rytais. Kapinynas mezolito laikotarpyje taip pat galėjo būti veikiamas gilesnių, bendrų komunikacijos ir inovacijų ryšių, besitęsiančių ilgą laiką, Šiaurės Rytų kryptimi. Taigi, Gros Fredenvalde mezolito laikotarpio kapinynas yra pačiame pietvakariniame šių įtakų pakraštyje.

## ILIUSTRACIJŲ SĄRAŠAS

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2 pav. Gros Fredenvalde kapinyno tyrimų plane (1 ir 2 kompleksai) pažymėti kapai bei 1962-aisiais metais surasta konstrukcija su individų palaikais. *A. Kotulos brėž.*

3 pav. Gros Fredenvalde kapinynas. 1962-ųjų metų nuotraukoje, kuri daryta pirmąją atradimo dieną, pažymėti 1 komplekse išskirti individai. *Brandenburgisches Landesamt für Denkmalpflege nuotr., A. Kotulos schema.*

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5 pav. Gros Fredenvalde Objekte 1/4 fiksuoti jauno vyro kojų kaulai, išsidėstę beveik anatominėje padėtyje. *T. Terbergerio nuotr.*

6 pav. Mezolito-neolito chronologijos Šiaurės-Centrinėje Europoje schemeje nurodomas Gros Fredenvalde ir kitų svarbių kapinynų datavimas. Išstinė linija: radioaktyviosios anglies datavimo metodu nustatytos datos. Brūkšninė linija: numanomas laikotarpis nustatytas atsižvelgiant į pavienes radioaktyviosios anglies datas ir kitus duomenis. *T. Terbergeris ir A. Kotula sud.*

7 pav. Titnaginės skeltės rastos mezolito laikotarpio kapuose (raudoni apskritimai: rasta, bespalviai apskritimai: nerasta). *A. Kotulos brėž.*

8 pav. Gros Fredenvalde. Dvi nulaužtos skeltės siejamos su jauno vyro palaidojimu (objektas 1/4). *A. Kotulos nuotr.*

9 pav. Gros Fredenvalde. Sudėtinio tipo kaulinio durklo fragmentai, greičiausiai rasto su žmogaus palaikais 1-ajame komplekse, 1962 metais (mastelis 2:3). *(Pagal Gramsch, Schoknecht 2003).*

10 pav. Sudėtinio tipo kauliniai įrankiai / durklai mezolito laikotarpio kapuose (raudoni apskritimai: rasta, bespalviai apskritimai: nerasta). *A. Kotulos brėž.*