Meeting of the Commission
The Final Palaeolithic of Northern Eurasia in Warsaw
28th–30th September 2022

Final Palaeolithic of Northern Eurasia.
Recent discoveries and new concepts

Book of abstracts

Faculty of Archaeology, University of Warsaw, Krakowskie Przedmieście 26/28, Warsaw

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Conference Programme

Hour	Wednesday, 28.09.2022 2.10
10:00-10:30	**Rejestracja/ Registration**
10:30-11:00	**Bartosz Kontny, Karol Szymczak** *Introduction*
11:00-11:30	**William Mills** *What is the potential for Late Hamburgian in Southern England?*
11:30-12:00	**Jakub Mugaj** *Towards socioarchaeological concept of Late Palaeolithic seasonality*
12:00-12:30	**Coffee Break**
12:30-13:00	**Elżbieta Ciepielewska** *Two concentrations of Arch Backed Piece Technocomplex from Rydno (Poland): flint materials and spatial organization of camps*
13:00-13:30	**Katarzyna Kerneder-Gubała** *Raw material procurement and distribution in the Late Palaeolithic. A case study from the chocolate flint mine in Orońsko, Central-Southern Poland*
13:30-14:00	**Hans Vandendriessche, Philippe Crombé** *The early Younger Dryas site of Ruien and the development of the 'Flat Blades and Bladelets Technocomplex'*
14:00-15:30	**Lunch Break**
15:30-16:00	**Tadeusz Wiśniewski** *Hunter-gatherer communities in the Lublin Upland: a case study from Lublin-Zemborzyce, Eastern Poland*
16:00-16:30	**Bruno Boemke, Andreas Maier, Wolfgang Römer, Isabell Schmidt, Frank Lehmkuhl** *Approaching sampling bias of Upper and Final Palaeolithic sites – a geospatial analysis of a European dataset*
16:30-17:00	**Tomas Rimkus** *Recent data on Swiderian lithic technology in the eastern Baltic*
17:00-17:30	**Marcin Dziewanowski** *Lower Odra basin – the most recent trends of research on Final Paleolithic and Mesolithic*
19:00	**Social Meeting**

Conference Programme

Hour	Thursday, 29.09.2022 2.10
09:30-10:00	**Coffee Break**
10:00-10:30	**Sonja B. Grimm, Stine Detjens, Berit Valentin Eriksen, Sascha Krüger, Asli Oflaz, Tobias Reuter, Mara-Julia Weber** *Why did they come? The Lieth Moor and the recolonisation of northern Germany*
10:30-11:00	**Tobias Reuter** *Be(coming) Federmesser-Gruppen – Technological Transformations in Northern Europe during the Lateglacial*
11:00-11:30	**Sebastian J. Pfeifer** *Tradition and change. Final Palaeolithic osseous industries in mid-Central Europe*
11:30-12:00	**Marcin Wąs** *From the availability of raw material to the spread of settlement in the Late Paleolithic of Gdańsk Pomerania*
12:00-12:30	**Coffee Break**
12:30-13:00	**Isabell Schmidt, Birgit Gehlen, Katja Winkler, Alvaro Arrizabalaga, *et al.*** *Site distribution patterns and demographic estimates derived from a new, regionally revised database on Final Palaeolithic sites in western and central Europe*
13:00-13:30	**Egidijus Šatavičius** *Swiderian sites in Southern and Eastern Lithuania*
13:30-14:00	**Michał Przeździecki, Witold Gruździ** *From the core to the tanged point. Some remarks on lithic technology in Swiderian*
14:00-14:30	**Witold Gruździ, Katarzyna Pyżewicz** *Swiderian chaîne opératoires – from outcrops to usage of lithic tools. Examples from Poland*
14:30-15:00	**Iwona Sobkowiak-Tabaka** *The phenomenon of the Late Palaeolithic persistent places*
15:00-15:30	**Summarizing of the conference**
15:30-17:00	**Lunch Break**
17:00	**Studies of flint materials from Poland**

Conference Programme

Hour	Friday, 30.09.2022
08:00-18:00	Excursion to Krzemionki Opatowskie

Krzemionki Opatowskie: Museum and Archeological Reserve (UNESCO)

KRZEMIONKI

In the archaeological reserve area of about 350 ha you can admire a well-preserved mining landscape, namely mine slag heaps and mineshaft wells as well as excellently reconstructed architecture of the underground dating back to 5 or 4 thousand years ago.

Abstracts

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Approaching sampling bias of Upper and Final Palaeolithic sites – a geospatial analysis of a European dataset

A major challenge in (geo)archaeological research is to find explanations for the heterogeneous distribution of sites and to identify decisive factors. For this purpose, explanatory models covering climatic, taphonomic, demographic, cultural and/or economic factors, are developed. In the absence of differentiated analyses for large-scale areas, many studies rely on the assumptions that the distribution of archaeological sites is representative for the actual distribution of humans on the landscape. The main objective of this study is to test this assumption using a large dataset of more than 4000 Upper and Final Palaeolithic occupations. This complex task is approached by a geospatial analysis, comparing site settings relevant for the Palaeolithic settlement factors to site settings relevant for the modern to contemporary discovery factors. These settings are represented by 8 pan-European geodatasets on geology, glaciation, aeolian sediments, land cover and land use. The site frequency within these settings is analyzed in comparison to their respective share of the study area, resulting in over- and underrepresentations of sites in certain settings. First results of this geospatial analysis suggest that the actual distribution of sites is more strongly influenced by the discovery factors than the settlement factors. The highest overrepresentation of sites is found within land cover classes relevant for the discovery factors such as urban areas or mineral extraction sites. Over- and underrepresentations in the settlement factors, however, still support archaeological assumptions about settlement preferences. When comparing sites from different cultures of the Upper and Final Palaeolithic, differences in their frequencies regarding their settings can be observed. More significant changes, however, result from comparing different site types and regions. The main implication by this study is that the discovery factor has a large influence on the distribution of Upper and Final Palaeolithic sites and should therefore be considered in geospatial analyses to come.

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Two concentrations of Arch Backed Piece Technocomplex from Rydno (Poland): flint materials and spatial organization of camps

Rydno is a complex of Final Palaeolithic and Mesolithic sites by the Kamienna river, north to the Holy Cross Mountains. They are related to red ochre outcrops, exploited by prehistoric societies. Several kshemienitsas from Nowy Młyn Cypel area at Rydno are supposed to present a different, probably older form of assemblages of Arch Backed Piece Technocomplex and were called Kamienna Variant of ABP[1]. Two of them, Nowy Młyn Cypel II/89 and II/90, are subject of a more detailed analysis concerning morphological and technological description of flint materials with the use of refitted artefacts. An attempt to reconstruct living areas was undertaken with the help of artefacts spatial distribution and ring&sector method developed by D. Stapert.

Soft hammer technic was observed in both inventories, as well cores striking platforms preparation by faceting. Group of tools, strongly represented in the materials, is dominated by burins, then endscrapers and becs, some of them prepared on burin spalls. In concentration II/89 a series of narrow backed pieces on bladelets contrasted with the lack of backed pieces in kshemienitsa II/90.

[1]R. Schild, H. Królik, A. J. Tomaszewski, E. Ciepielewska 2011: Rydno. A Stone Age Red Ochre Quarry and Socioeconomic Center. A century of Research, Warszawa

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Lower Odra basin – the most recent trends of research on Final Paleolithic and Mesolithic

Lower Odra basin is an important region for understanding the cultural processes in Middle Europe in the Stone Age. The most recent discoveries in this region, especially concerning Late Mesolithic and Early Neolithic, shows the need for rethinking the problem of interregional contacts in Stone Age at all. From my point of view there is an interesting question; if the directions of contacts as 'routes' changed on the scale of time and if the discoveries dated to Late Mesolithic are important for Final Paleolithic?

Sonja B. Grimm[1]*, Stine Detjens[1], Berit Valentin Eriksen[1]***, Sascha Krüger[2]****, Asli Oflaz[3]*****, Tobias Reuter[1]******, Mara-Julia Weber[4]*******

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Why did they come? The Lieth Moor and the recolonisation of northern Germany

One of the highest concentrations of Final Palaeolithic sites in Schleswig-Holstein is in the area of the Lieth Moor. In contrast to the Ahrensburg tunnel valley, this density of sites was not widely recognised for various reasons (e.g., research history, degree of organic preservation). Recently, we began investigating this area in more detail to help us understand the socio-environmental transformations of the Final Palaeolithic. We aim at answering questions such as:
How did this particular area develop during the Late Pleistocene and Early Holocene?
What made this area attractive for Final Palaeolithic and Mesolithic hunter-gatherers?
How did they choose to place their camps?
Why did they come? And why did others not come?
Answers to some of these questions cannot be found based on this area alone but must be sought in the wider frame of the Late Pleistocene (re-)colonisation process.
For instance, in contrast to our expectations, we have not found evidence of a Hamburgian visit to this area. The distribution of Hamburgian sites in Schleswig-Holstein seems to indicate a pattern of following reindeer routes into the landscape. So rephrasing our question: What made this area unattractive for reindeer?
However, material of the Ahrensburgian has been found in the Lieth Moor area. At Stellmoor in the Ahrensburg tunnel valley, 35km to the south-east, the Ahrensburgian is associated with reindeer mass hunting, but were they exploiting the Lieth Moor area for the same reason? Have reindeer routes and/or settlement patterns changed over the millennia?
The oldest archaeological traces in this area are attributed to the Federmesser-Gruppen. Why did these people choose this area and come back repeatedly?
With more questions than answers, we will present recent results from our different and ongoing investigations and show the great potential of this area.

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Swiderian chaîne opératoires – from outcrops to usage of lithic tools. Examples from Poland

This paper aims to present our studies related to the production, technology, and methods of use of lithic artefacts of Swiderian societies. We based our research on materials delivered from individual archaeological sites located in Poland.

We focus on chaîne opératoires in terms of the selection of flint raw materials, reduction techniques, and usage of lithic tools. The main research methods which we applied are use-wear analyses, refitting methods, and experimental studies. As an effect of our studies, we would like to show the relationship between the choice of raw material (local o "imported") and its technology and intended purpose. We also concentrate on the relationship between the applied techniques or production methods and the function of lithic tools. Special attention we paid to the morphology of the artifacts, correlation between the shaping, retouching of the specimen, and its use or hafting.

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Raw material procurement and distribution in the Late Palaeolithic. A case study from the chocolate flint mine in Orońsko, Central-Southern Poland

The chocolate flint mine in Orońsko (Central-Southern Poland) is one of the few currently known mining sites with preserved mining shafts well-dated to the Late Palaeolithic. Recent research indicates a relationship of the exploitation of primary chocolate flint deposits with the Tanged Point Technocomplex, primarily with its older phase (OTP). Earlier works carried out in the 1930s by the well-known Polish researcher Stefan Krukowski, however, also document the presence of mining shafts and pits related to the Arched Backed Piece Technocomplex. During the Late Palaeolithic, especially in the Younger Dryas period, distribution of the chocolate flint took place on a large scale. It has been already suggested, that some of the artefacts made of this raw material discovered on the Late Palaeolithic sites located outside the zone of the chocolate flint deposits may come – among others – from Orońsko. This problem will be discussed in detail in this paper.

William Mills (william.mills@zbsa.eu)
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What is the potential for Late Hamburgian in Southern England?

The Hamburgian and Creswellian techno-complexes are identified as the two distinct "Nordic" techno-complexes with the most northern extents at the onset of the Late Glacial. Both techno-complexes share Magdalenian technological characteristics, however they contrast with their distinct tool assemblages. Whereas the "Classic" Hamburgian is not currently recognized in Britain, the later "Havelte" Hamburgian has been identified in Scotland. The projection of available radio-carbon dates on the new OxCal20 curve places the southern English Creswellian before the currently dated Hamburgian sites. A concentration of "Havelte" sites in the Netherlands, near a potential dryland passage to SE England also evokes an alternative route for the Hamburgian into the Britain contrasting with a northern model crossing Doggerland. The question also remains whether these techno-complexes reflect different activities. This presentation aims to assess the evidence for the Hamburgian in the UK from a chrono-typological perspective, and consider potential axes of connection with recognized Hamburgian sites.

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Towards socioarchaeological concept of Late Palaeolithic seasonality

The mobility and settlement system of hunter gatherer societies are one of the main area of Late Palaeolithic research. The movement strategies of groups were considered as a changeable through late glacial period, as well as settlement behavior. Due to the variable environmental condition and expected general high mobility of hunter-gatherer groups in that period the seasonality play significant role in interpretations that has been presented in the past. Several data indicate that hypothetical seasonal behavior could be more permanent cultural phenomenon of Late Palaeolithic societies in Europe. The paper propose a conceptual attempt to show the seasonality as a crucial element of social organization, referring to anthropological concept of hunter-gatherers sociopolitical system.

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Friedrich Schiller University Jena, Seminar Prehistoric Archaeology, Germany

Tradition and change. Final Palaeolithic osseous industries in mid-Central Europe

While the rich osseous industries of the Upper Palaeolithic in the middle range mountain zone between Rhine and Oder are comparatively well researched and characterised, the bone and antler technology of the subsequent Final Palaeolithic techno-complexes is much less understood and the archaeological record is meagre. It is a common and, in principle, certainly correct idea that with the onset of the Late Glacial, the increased availability of suitable timbers as well as a focus on frontally hafted lithic projectiles rendered great parts of the elaborate Pleniglacial osseous technology obsolete. Recent findings, however, suggest that the typological spectrum of the Final Palaeolithic is more diverse than previously anticipated and, moreover, continues Late Upper Palaeolithic traditions along general lines. This presentation gives an overview on the current state of knowledge and introduces newly dated artefacts.

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From the core to the tanged point. Some remarks on lithic technology in Swiderian

The presentation is an attempt to summarize the current state of research on the technology of processing flint raw materials among the community of Swiderian culture. To achieve this, we investigated materials from different parts of Poland focusing our studies mostly over lithic refittings.
The large number of analyzed lithics comes from collection were refitted blocks were complete and it allowed for a detailed description. The result of the conducted studies is the reconstruction of technological behaviors, synthesized within individual or generalized chaîne opératoire. An important aspect of the discussed research is the connection of the reconstructed technological operations with their material correlates, i.e. specific types of chips, flakes or cores. The presentation will emphasize the strong relationship between the concept of lithic reduction and the morphology of tanged points.

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Be(coming) Federmesser-Gruppen – Technological Transformations in Northern Europe during the Lateglacial

The emergence and dispersal of the Federmesser-Gruppen (FMG) in Northern Europe during the Lateglacial is associated with far-reaching changes in the behavioural traditions of hunter-gatherer groups. During this time, the landscape transformed from open tundra to wooded landscapes, which demanded behavioural adaptations in subsistence and related areas of activity. Nevertheless, it can only be assumed, how exactly these factors manifested in the way of life of hunter-gatherer groups. In this regard, the study of technical activities and choices offers the great potential of revealing aspects of everyday human activities. This paper deals with the technological analysis of lithic inventories of the FMG and the preceding Hamburgian with the aim of revealing concepts and strategies in lithic production. The comparison of technological aspects of both technocomplexes elucidates that very different concepts in lithic production were implemented, each of which is associated with distinct ways of life.

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Recent data on Swiderian lithic technology in the eastern Baltic

The Swiderian culture is one of the most known Final Palaeolithic taxonomic group in the eastern Baltic region. Its lithic

finds are usually found in sandy type open-air sites on the river banks and lakeshores, where the characteristic types of Swiderian arrowheads are found – the tanged and willow leaf-shape points. However, the data on its lithic processing (e.g. blade technology, core operation) are studied poorly as these findings are frequently found in mixed archaeological assemblages, that represent multiple settling episodes of different chronology at the sites. In the absence of homogeneous concentrations, it is therefore difficult to study the lithic processing stages and techniques exclusively characteristic to the Swiderians. In southern Lithuania, rescue excavations in 2020 on the western shore of Kalviai Lake revealed a homogenous flint assemblage in the lacustrine environment, consisting of several dozen large flakes, long blades, and opposite platform cores typical to the Final Palaeolithic lithic technology. The chronology and taxonomy of the assemblage were confirmed by the discovery of two tanged points with ventral retouch on the tangs. This concentration has been further studied by spatial and refitting analysis and compared with other Swiderian lithic finds known in Latvia and Lithuania. These finds provide a more detailed insight into the blade technology and core preparation stages of the Swiderian culture in the eastern Baltic. Besides lithic studies, multiple soil samples have been taken in order to acquire data on landscape development and how prehistoric societies operated in it.

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Swiderian sites in Southern and Eastern Lithuania

About 140 Swiderian tradition sites are currently known and are spread throughout the Southern and Eastern part of Lithuania. Almost 25 of them have been excavated archaeologically in a smaller or large scale. This tradition emerged locally in the South-eastern Baltic region, probably from the complexes of the early Ahrensburgian tradition because in the early Swiderian stage, numerous Ahrensburgian features still exist.

Based to the lithic material from the Lithuanian explored sites, the Swiderian tradition can be divided into two major technological-chronological stages. The early stage is characterized by not eminently developed percussion technique, where double-platform prismatic, rarely single-platform cores were used to produce wider and less regular blades. In the complexes projectile points are dominating with a more or less prominent tang which is formed by steep retouch on both edges. During the production process of these points, the proximal part of the blank is weakened by marginal notching and then it is broken at the notch. The waste of the secondary processing of such type is especially characteristic to the complexes of this group. After breaking the facet is corrected (thinned) by a flat, most often unifacial retouch only at the tip of the tang. Isolated Ahrensburgian type tanged points, instances of the use of microburin technic, frequent oblique retouching on the tips of points, etc are also often detected. Among scrapers, end-scrapers (of oblong and short proportions) made on blades and flakes are dominating. Most often found burins are dihedral burins, especially the central ones, also retouched ones with a diagonal blow. Meanwhile, single angle burins are rare. Combined artefacts also occur in the complexes.

According to dated analogies from the territory of Poland where the sites of this stage were dated ^{14}C to 12.900–12.000 BP, in Lithuania, Mergežeris-3, Sudota-2, Katros ištakos-1A, Bratoniškės-1A, Ežerynas-1, 14, Puvočiai-1, Eiguliai-1Ba, 1Bb, Pūgainiai–Papiškės-1, Margiai-1, Dubičiai-3 and other sites are attributed to this stage.

The complexes, where fairly small tanged points have been discovered, should be called exceptional cases in the region (Mergežeris-3, Pūgainiai–Papiškės-1). In light of a typological–technological analysis of the inventory, these sites should be dated to the beginning of the Younger Dryas, a period of the abrupt and marked cooling of the climate. It is likely that a sharply cooler climate once again locked the ground's surface with permafrost and the people of that time were unable to exploit the larger flint boulders in the deeper layers at some of the locations and had to make do with small diameter boundaries on the surface.

The late stage of the Swiderian tradition is already fairly distinctive and typologically–technologically united and characterised by especially developed percussion technique where double-platform prismatic cores were used to produce narrow and long blades. It should be marked that in the sites of this type, the first conical cores appeared as well as regular blades and micro blades struck from them. In comparison with the earlier group, most artefacts were produced on blades. In the complexes projectile points are dominating with a less prominent or non-prominent tang (leaf-shaped), which is formed by oblique-surface (flat) retouch on both edges, and the remnant of the platform with a bulb of percussion are removed by flat retouch. Besides, all the reverse side of a tang is retouched in the same way.

The sites of this stage could be dated to 12.000–11.000 BP, i.e., the second half of the Younger Dryas and the beginning of the Preboreal. Kabeliai-2C and Pasieniai-1C complexes as well Neravai-1 site where the material was dated ^{14}C, can be directly related to the second half of the Younger Dryas or the beginning of the Preboreal. Most Swiderian sites in Lithuania can be also attributed to this stage (Rėkučiai-1B, Eiguliai-1A, Bc, C, D, Pasieniai-1C, Bratoniškės-1B, 1C, Puvočiai-1, Margiai "Isle", Netiesos-1, Skaruliai-1, 2).
Based on quantitative and qualitative aspects of the lithic inventory discovered in the sites and the geographic position of these sites, it is possible to distinguish several different types of the Swiderian sites which are living settlements, hunting camps, flint mine and knapping sites as well as killing sites.
All known Final Palaeolithic Swiderian sites in Lithuanian territory due their geological structures and acid soil, are lack of bone or antler artefacts. Only flint as a mineral raw material for tools production was used in Swiderian sites. In many of them predominant local Baltic erratic flint with grey colour of different shades. There are also several sites in Lithuania where small amount of flint artefacts made of other kinds of flint raw material have been found which origin till now is not clear. Together with flint artefacts a non-flint lithic were collected only at several Swiderian sites in Lithuania. Almost all the non-flint lithic finds, made of quartzite, sandstone and chalcedony, were discovered in Pasieniai-1C complex. Their distribution in the excavated area was analogous to the flint finds.
These conclusions are only preliminary and may be amended by future more detail research.

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Site distribution patterns and demographic estimates derived from a new, regionally revised database on Final Palaeolithic sites in western and central Europe

In the face of severe environmental changes, humans' demographic dynamics during the Final Palaeolithic are of particular interest in terms of their spatio-temporal patterning, human cultural responses and the genetic history of our ancestors. So far, independently derived Pan-European demographic estimates predict a substantial population increase during the Magdalenian and possibly the contemporary technocomplexes– coupled to the resettlement of the northern Plains and the mountain ranges after the Last Glacial Maximum – followed by a slight decline during the subsequent Final Palaeolithic. Here, we take a closer look at new demographic estimates and density maps of site-distributions in western and central Europe. Estimates were obtained applying the methodological procedure of the 'Cologne Protocol' on evidence from two consecutive and climatically distinct chronozones, the Greenland Interstadial 1 c-a (Bølling/Allerød) and the Greenland Stadial 1 (Younger Dryas). To this end, a database was compiled and revised regionally – taking into account the particular importance of regional expertise for the period of the Final Palaeolithic. It comprises about 1800 sites assigned to the Final Palaeolithic. A diachronic comparison of the observed patterns in the site distribution is conducted on both a Pan-European and regional scale and assessed against the reliability of the temporal sub-division of the dataset.

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The phenomenon of the Late Palaeolithic persistent places

Persistent places are commonly known from different parts of the world and various times. This concept, defined by S.H. Schalnger (1992) as repeatedly used locations during the long-term occupation of a region, highlights mainly the aspect of excellent environmental conditions for living and hunting. A few other authors pointed out additional factors which might influence the origin of such places (i.e. Barton et al. 1995, Binford 2004).
Frequently visited by hunter-gatherers, these regions are ideal spots for studying human presence and activities in the

past through natural archives, such as peat bog and lake deposits. The concentration of human occupation also allows for studying the patterns of settlement in the wider environment.
This paper considers several Late Palaeolithic persistent places from the North European Plain in terms of their origin, durability and meaning.

Barton R.N.E., P.J. Berridge M.J.C. Walker, Bevins R.E. 1995. Persistent places in the Mesolithic Landscape: an example from the Black Mountain uplands of South Wales. *Proceedings of the Prehistoric Society* 61, 81–116

Binford L.R. 2004. Beliefs about death, behaviour, and mortuary Practices among huntergatherers: a search for causal structure? [in:] J. Cherry, C. Scarre, S. Shennan (eds), *Explaining social change: studies in honour of Colin Renfrew*. Oxford, 1–15

Schlanger S.H. 1992. Recognizing persistent places in Anasazi settlement systems. [in:] Rossignol J, Wandsnider L (eds), *Space, time and archaeological landscapes*. New York, 91–112

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The early Younger Dryas site of Ruien and the development of the 'Flat Blades and Bladelets Technocomplex'

The in-depth technological analysis of Ruien, primarily based on refitting, offered data that greatly improved our understanding of the site's position in the cultural landscape of the Younger Dryas. Despite being the oldest dated site belonging to the Younger Dryas technological traditions in Northwestern Europe, as demonstrated by two 14C-dates obtained on the ash remains of a structured hearth, the lithic industry of Ruien already displays most characteristics of assemblages that are assumed to have occurred mainly at the transition towards the Preboreal, i.e. Epi-Ahrensburgian, Belloisian/Long-Blade industries, implying its cultural affiliation with the latter. In addition, refitting allowed us to identify specific technological procedures that give us new insight into the development of the overarching Flat Blades (and Bladelets) Technocomplex.
The technological and spatial analysis also allowed us to make some inferences about the site's function and the wider settlement system. Despite the small area it covers (ca. 50 m2), based on aspects of its technological organization, it seems unlikely that the site of Ruien should be interpreted as a special purpose site. Instead, all elements seem to converge towards an interpretation as a small, peripheral part of a (much?) larger residential settlement. An interpretation that is in perfect agreement with its position in the landscape, at the foot of an impressive lookout point, near a potentially major river crossing, known from ethnographic parallels to be extremely favorable locations to hunt large herds of animals, such as reindeer.

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From the availability of raw material to the spread of settlement in the Late Paleolithic of Gdańsk Pomerania

The aim of the presentation is to discuss the relationship between the availability of flint raw material and the spread of Late Palaeolithic settlement in Gdańsk Pomerania.
As it is commonly known, most of the Late Palaeolithic flint processing technologies required a supply of raw material with sufficiently large parameters, as well as the availability of appropriately rich deposits and flint outcrops. Therefore, when considering the problem of Late Palaeolithic settlement in Gdańsk Pomerania, attention should be paid to the situation regarding the locally available raw materials. From this perspective, Gdańsk Pomerania is an interesting area of research on Late Palaeolithic settlement, because this region is quite different from the rest of the Lowland. Local raw material resources are in some parts very small or completely absent. In addition, there is a clear diversification within this region, especially between the poor northern part (the Baltic coast) and the much more flint-rich southern part (the lower Vistula valley area). In the northern part, the only variety of flint is Pomeranian flint occurring in the form of small pebble concretions (up to 6-7 cm). From the point of view of late Palaeolithic flint processing technologies, it was a raw material that did not meet the required metric criteria, e.g. for the production of blades. From this perspective, the northern part of Gdańsk Pomerania appears to be a poor raw material province, which limited the character of the local settlement. On the other hand, the much better quality erratic baltic flint, so popular in the late Palaeolithic on the entire Lowland, occurs in

greater quantities in the southern part of Gdańsk Pomerania in the areas closer to the Lower Vistula valley. In this region, the number and size of late Pleistocene sites and assemblages is greater than in the north. It seems that the difference in the number of Palaeolithic sites recorded in the north and south of Gdańsk Pomerania can be explained by differences in local lithic resources.

For a better understanding of this problem, in my presentation I would like to draw attention to two aspects: 1) the current state of researches on Late Palaeolithic in the area in question and the density of sites, and 2) the quantity and quality of local flint resources in relation to the specificity of blade technology in Late Palaeolithic flintworking.

Considering the problem of the quality of the traces of Late Palaeolithic settlement in Gdańsk Pomerania, the following questions should be asked: what was the development of the Palaeolithic settlement in relatively poor raw material conditions, how this situation influenced the nature of local flint production and what is the specificity of late Palaeolithic sites in the region of Gdańsk Pomerania, and especially what is the nature of flint inventories in terms of quantity, technology and typology.

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Hunter-gatherer communities in the Lublin Upland: a case study from Lublin-Zemborzyce, Eastern Poland

Late Palaeolithic and Mesolithic settlement of the Lublin Upland (eastern Poland) remains poorly investigated. During research project carried out between 2015 and 2019 important discoveries were made in this area (Wiśniewski et al. 2020; Wiśniewski, Niezabitowska-Wiśniewska 2021).

In the 1920s, numerous remains of settlement connected with the Tanged Points Technocomplex (Swiderian culture) were recorded in Lublin-Zemborzyce. This fact was not confirmed during the mentioned project, which could result from the inability to locate and verify places where former discoveries were made.

Particularly relevant is the confirmed settlement of the Arch-Backed Pieces Technocomplex in the area subject to research (Lublin-Zemborzyce, ul. Rosy). An area of 7m^2 was explored during the surveys. In total, 192 flint artefacts were discovered, including 18 tools, among which seven arch-backed pieces were distinguished. The inventory also included several single-platform cores, some of which form refittings. Blade blanks are irregular, with flat butts. Flint processing included local erratic flint and chocolate flint from outcrops situated over 100km to the west of the site.

So far it was difficult to state whether this settlement occurred only in the area to the west of the Vistula, or whether it happened on the Lublin Upland at all. Only single finds interpreted in this way were associated with the investigated area. Thus, discoveries made shed a new light on the settlement of these communities in the Lublin Upland and also changed the perception of the eastern border of this cultural unit in Central Europe.

Investigations also yielded traces of settlement from younger periods. The most conspicuous finds come from Lublin-Zemborzyce, las Rudki, where remains of settlement by the hunter-gatherer community from the early Mesolithic were found.

Wiśniewski T., Krajcarz M.T., Standzikowski K., 2020. Turonian flint economy in the easternmost Magdalenian: new data from Stare Baraki, site 1 (eastern Poland), *Archaeol Anthropol Sci* 12, 281 (2020). https://doi.org/10.1007/s12520-020-01230-y

Wiśniewski T., Niezabitowska-Wiśniewska B., 2021. Late Palaeolithic hunter-gatherers in Central Europe: new data from eastern Poland, *Antiquity* 95 (381), E13. doi:10.15184/aqy.2020.184