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A NEW DATA FOR RESEARCH ON MAGDALENIAN SETTLEMENT IN EASTERN POLAND

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NATIONAL SCIENCE CENTRE POLAND

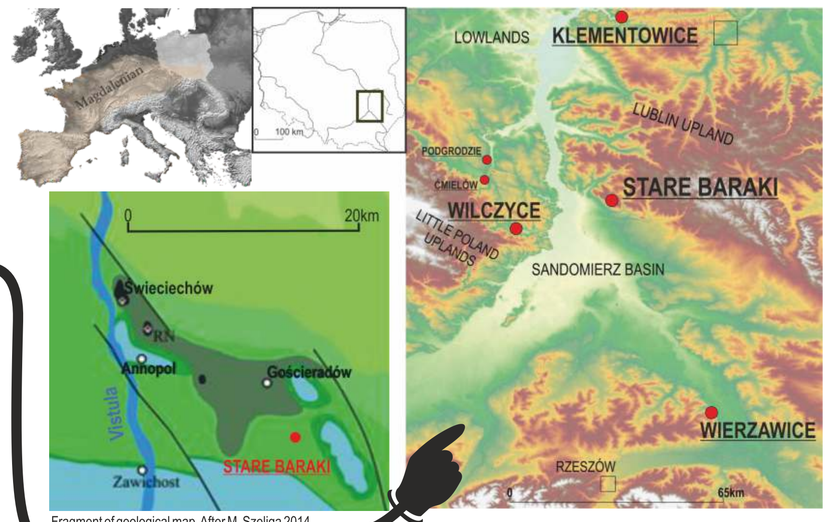
The subject of the presentation is connected with the realization of a research project *Late Palaeolithic settlement in the western part of the Lublin Upland* financed by the National Science Centre (2014/15/N/HS3/01766).

INTRODUCTION

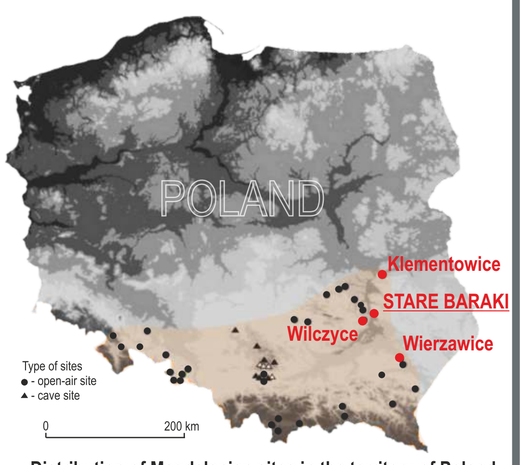
The subject of the presentation is connected with the realization of a research project.
The **main aim** of the project is to research the late Palaeolithic settlement in the western part of the Lublin Upland.
The **chronological frames** of the project begins after the Last Glacial Maximum (16.000 calBP) to the beginning of the Holocene - Preboreal period (10.000 calBP).

LATE MAGDALENIAN ON EASTERN BORDER

In the territory of eastern and south-eastern Poland, only several well-dated magdalenian sites are known so far. The dates from Wilczyce confirm the settlement from phase GS-2a (Połtowicz-Bobak 2013) and from Klementowice, the radiometric data (14C, OSL) also confirms GS-2a (before warming period GI-1e) (Wiśniewski 2015).
The site Wierzawice has absolute dating younger than GS-2a and is the youngest one in the mentioned area (see Table 1).
The structure of raw material connects these inventories. The basic material or one of the most important for the manufacturing of tools were Turonian flints with Świeciechów flint as the most popular type.



Fragment of geological map. After M. Szeliga 2014.



Distribution of Magdalenian sites in the territory of Poland.

A NEW DISCOVERIES

During surface surveys conducted in the spring of 2018 it was possible to positively verify Stare Baraki site. The site is located in the south-western part of the Lublin Upland (eastern Poland). The archaeological works (sondage excavations) were also conducted in the summer of 2018.

MICROMORPHOLOGY AND OSL DATING

The results for the OSL dating is **10.6 ± 0.7 ka** for unit 2a (see below) and **12.6 ± 1.0 ka** for the unit 3 (see below).

The results for the micromorphology analysis are very interesting. **Unit 2a** show us frost processes and periglacial conditions after deposition.
Unit 2b show us, among the other things, post depositional mixing with sediments of **unit 3**.

CONCLUSIONS

- The site Stare Baraki is the first Magdalenian settlement in eastern Poland which is located directly in the vicinity of outcrops of a very good quality Turonian flints.
- The **micromorphological** observations of individual units (2a, 2b, 3) may suggest that mixing of sediments could have an impact on the result of OSL dating (e.g. dating of unit 3 could be rejuvenated by the sediment of unit 2b).
- **Dating of charcoals** did not bring the expected results.
- These findings may confirm earlier assumptions that the **Magdalenian settlement** in the eastern borderlands was uninterrupted and stable from GS - 2a to GI -1c / GI-1a.
- The research will be further studied at a wider and more complex scale.

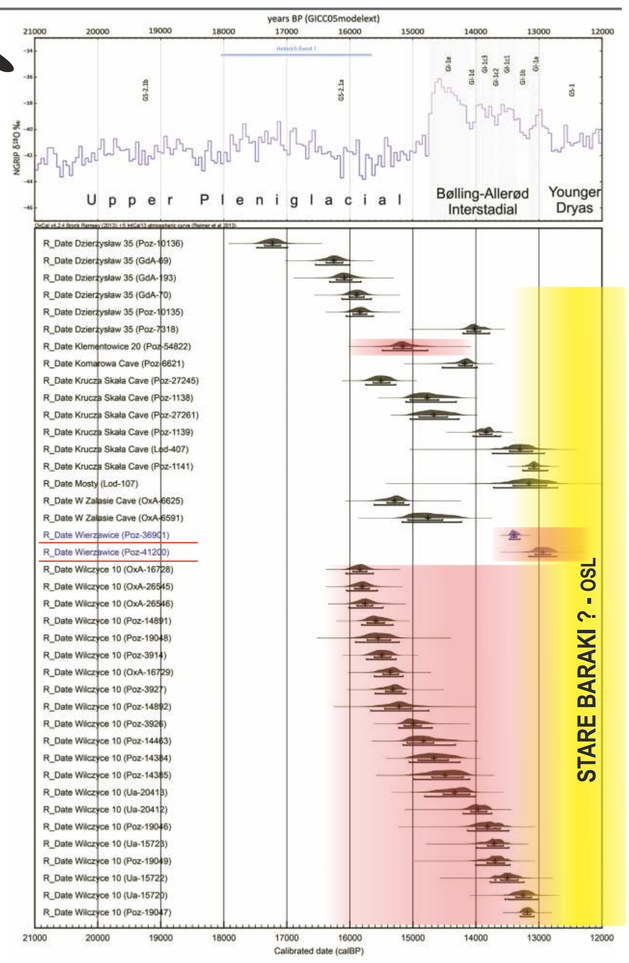


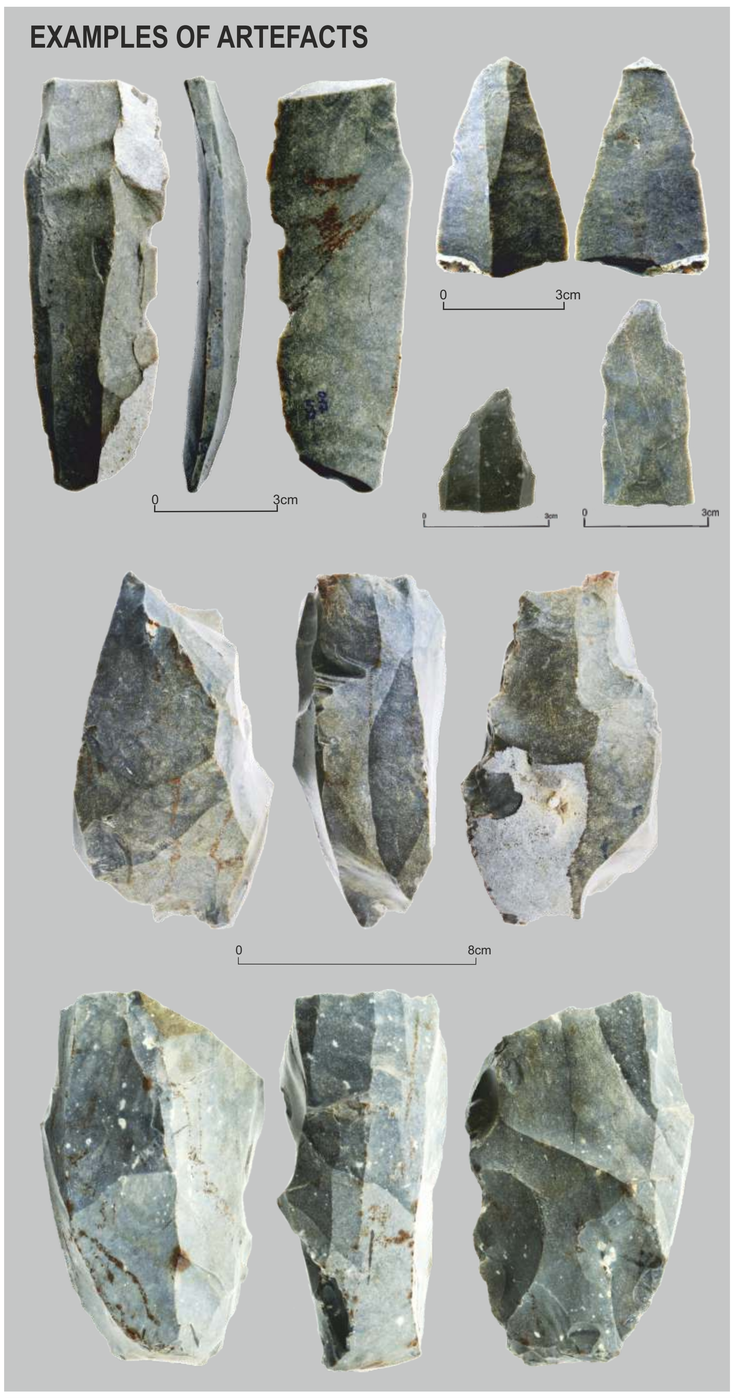
Table 1. Correlation of 14C datings from Wierzawice and other Magdalenian sites in Poland with global palaeoclimatic events recorded on oxygen isotopes (after D. Bobak *et all*. 2017).

STARE BARAKI - about the site

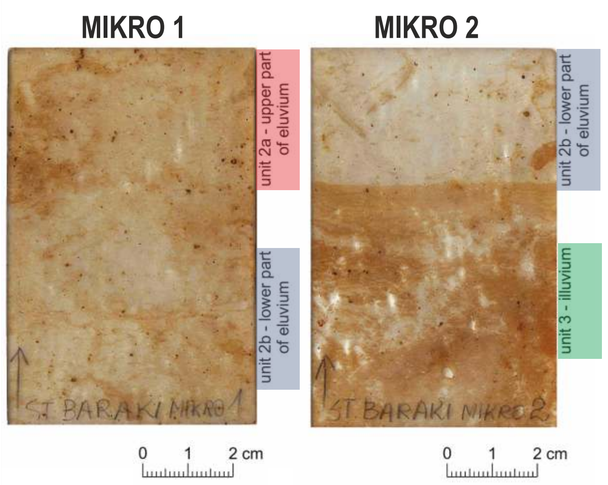
N 50º49'1" E 22º3'10.39"

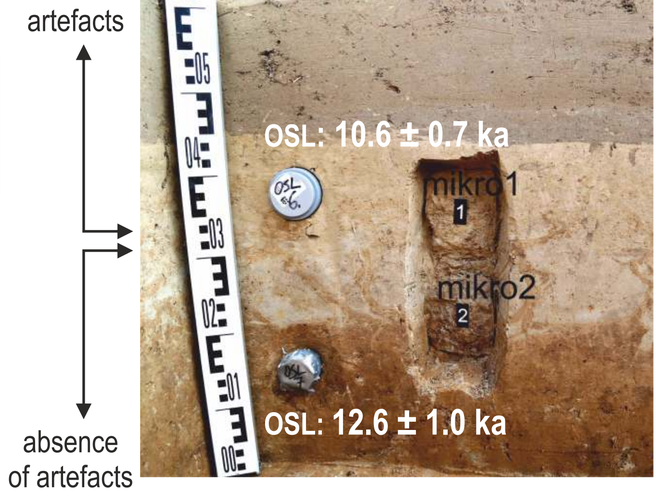
- <u>workshop near the outcrops</u> (turonian flints)
- loess
- nearest river *Karasiówka* - 3,5km
- tested area: 14,5m^2
- 796 items, 43 tools (perforators - *Bec* type, truncations)
- single platform cores for blades with preparation
- long, curved blades
- spur butts *(en éperon* preparation)
- turonian flints (local) - Świeciechów and Gościeradów type

EXAMPLES OF ARTEFACTS



MICROMORPHOLOGY AND OSL DATING



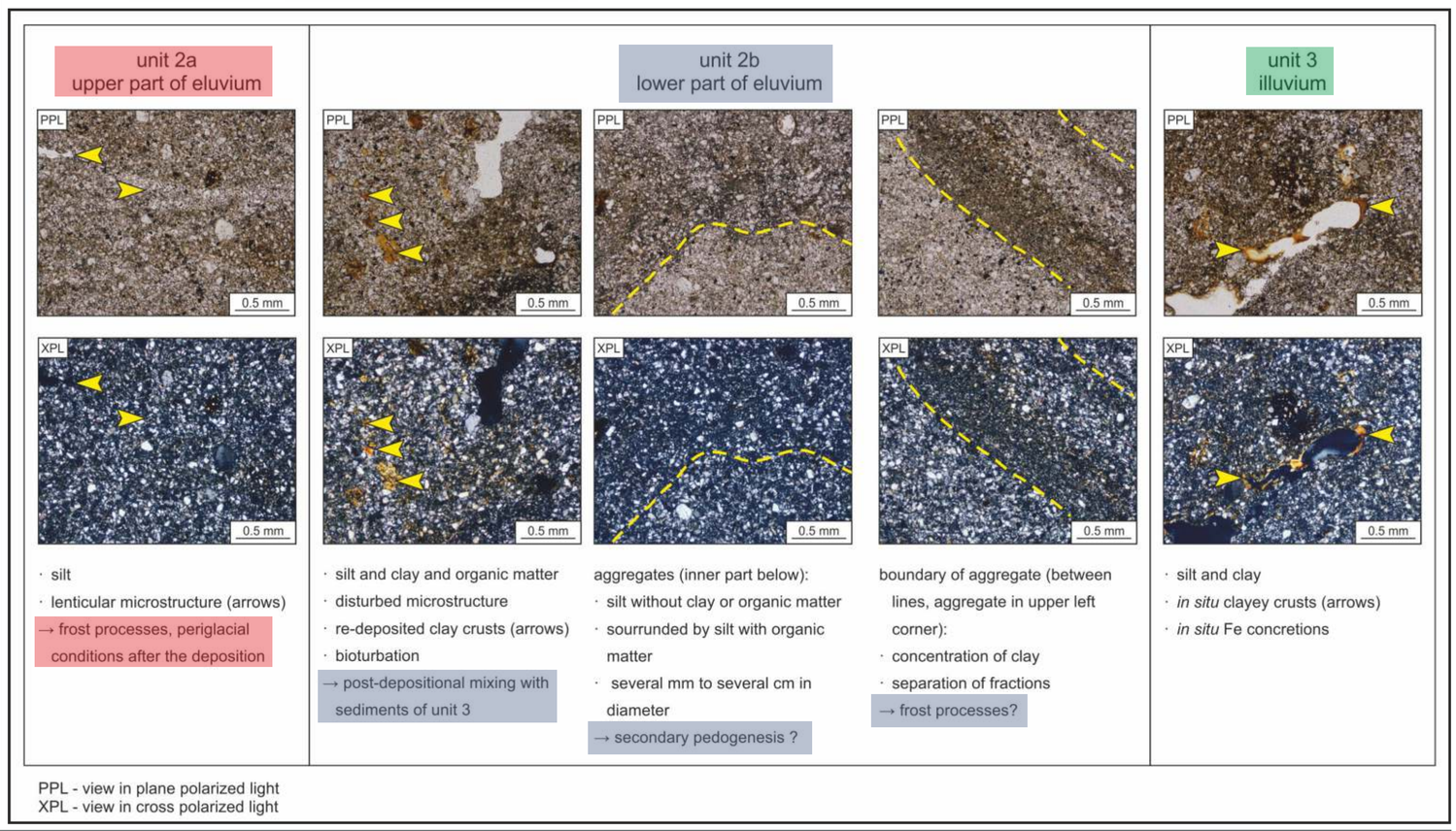


unit 1 - plowed A horizon

unit 2a - upper part of eluvium

unit 2b - lower part of eluvium

unit 3 - illuvium



unit 2a upper part of eluvium	unit 2b lower part of eluvium			unit 3 illuvium
· silt · lenticular microstructure (arrows) → frost processes, periglacial conditions after the deposition	· silt and clay and organic matter · disturbed microstructure · re-deposited clay crusts (arrows) · bioturbation → post-depositional mixing with sediments of unit 3	aggregates (inner part below): · silt without clay or organic matter · sourrunded by silt with organic matter · several mm to several cm in diameter → secondary pedogenesis ?	boundary of aggregate (between lines, aggregate in upper left corner): · concentration of clay · separation of fractions → frost processes?	· silt and clay · *in situ* clayey crusts (arrows) · *in situ* Fe concretions

PPL - view in plane polarized light
XPL - view in cross polarized light

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