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Early human occupation of Central Europe: Reassessing Racibórz Studzienna 2 - a Middle Pleistocene site in the Oder **River Valley, Poland**

Introduction

The open-air site **Racibórz Studzienna 2** is located in the Oder River basin in the Silesian Lowland, Poland. Nowadays situated in an abandoned quarry, the site was discovered in the 1930s. Some of the first artefacts were found by amateur archaeologist H. Lindner. In the years 1961 to 1963 and in 1974, the site was systematically excavated for the first time. A small number of lithics was recovered during these years. Characterised by **fluvial sand** and **gravel layers**, the age assessment of the site is mainly based on the local stratigraphic model of river terraces. Together with the evaluation of the lithics, this led to a **Middle Pleistocene age estimation** indicating an Early Middle Palaeolithic occupation.

Assuming the age estimate is correct, Racibórz Studzienna 2 is extremely valuable for the research of Central Europe concerning 1) the early human occupation and 2) the Lower-Middle Palaeolithic transition.

Reassessment of the site



HOG conference

2023 Aarhus



206.00 GEO2 4 GEO2 GEO21OSL8 204.00 5 GEO2 GEO19OSL7 -5a GEO1 GEO1 GEO' 202.00 GEO15 GEO14 GEO1 8c 8d GEO12OS 8e 🛡 200.00 8h NE SW GEO 8k GEO9 198.00 01 01





4) Use-wear analysis of the lithics

technological aspects

Methods:

1) (Re-)excavating the site [started in summer 2022]

2) Taking samples to improve the understanding of the environmental and chronological context of the site [samples for OSL]

Goals: To clarify uncertainties in the precise chronological classification and to exploit its full potential especially regarding

dating & sedimentological + micromorphological analyses were taken]

3) (Re-)analysis of the artefacts [finds from former excavations + newly discovered finds]

SE

find layer

Trench 2/2022 - complete South profile •OSL samples • geological samples

The top of the section comprises another series of alluvial sediments covered by loess and modern soils.



Lithic analysis - Examples of artefacts. The total of n = 22 (re-)analysed artefacts can be categorised as flakes, a core & retouched tools

Flint artefacts occurred in fluvial sediments containing small pebbles (layer 2 in trench 1/2022 and 9c in trench 2/2022). Below this layer was a cryo-statically disturbed layer of fine-grained sediments (layer 3 in trench 1/2022). Above the layer with artefacts, a block of lithologically differentiated deposits (layers 8 - 1 in trench 2/2022) with a thickness of approximately 5 m was exposed. In the upper part of this block, a layer with reversed density gradient systems (layer 7 in trench 2/2022) occured.



Qualitative use-wear analysis - Examples of use-wear traces [potentially resulting from contact with hard material]



Two separate trenches were opened, leading to the identification of the former excavation led by K. Sobczyk in 1974. The archaeological horizon could be identified, yielding further lithics. The preservation state of the artefacts could be addressed, giving information concerning the post-depositional context of the site. Moreover, clear traces of use could be identified, confirming the assignment of the lithics as artefacts.

The results of the new geological and sedimentological analyses are still pending. Once these are established, this research will help to **pinpoint the occupational character** of the site and will contribute towards the identification of technological features within the Middle Pleistocene in Central Europe.

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