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Dzierżysław 35 – an open-air Magdalenian site in Upper Silesia

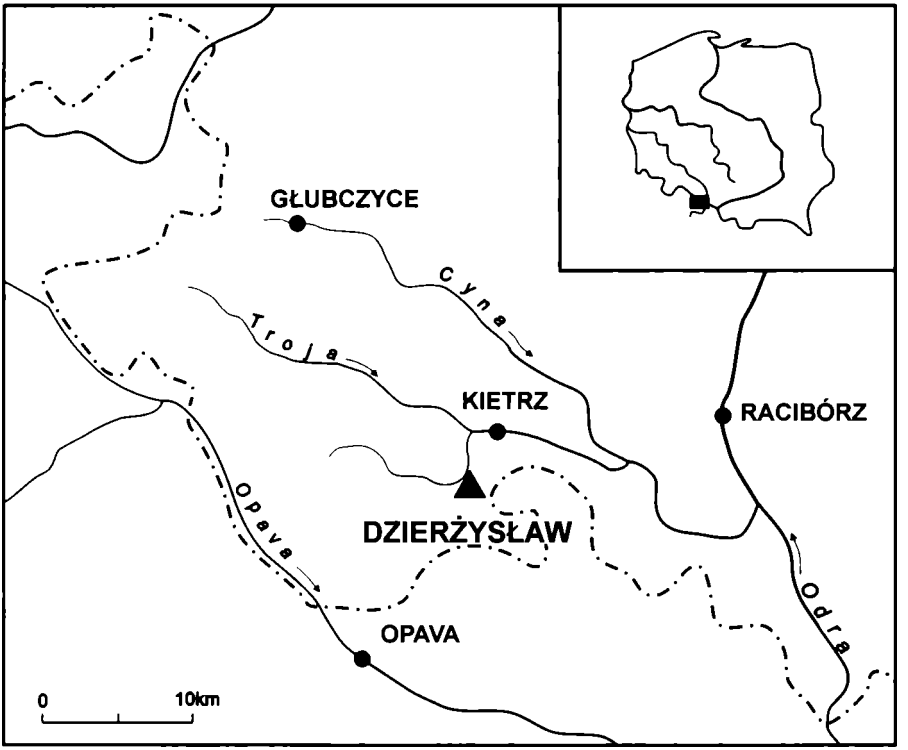

Fig. 1. Location of site Dzierżysław 35. Acc. to M. Gedl with addenda

The locality of Dzierżysław (Głubczyce district) is situated about 20 km to the west of Racibórz (Fig. 1). The site is located about 2.5 km from the center of Dzierżysław, on the right side of the Morawka River, in the floor part of its valley, on a slight morphological elevation rising about 1 m above the lowest part of the valley. At places the Morawka valley is fairly wide, surrounded by low hills.

The site was discovered by Marek Gedl during the survey conducted in May 1996. Numerous flint finds, among them tools and cores were discovered in 1996, and, subsequently, during the surveys in the autumn 1996, and spring 1997. Systematic excavations were carried out in the years 1997 and 1998 by the authors of this report. In the investigations cooperated,

besides, Maciej Pawlikowski (Mining and Metallurgy Academy), Stefan Skiba (Jagiellonian University), Agnieszka Wacnik and Piotr Wojtal (Polish Academy of Sciences). Students from the Institute of Archaeology of the Jagiellonian University and pupils from the secondary school from Kietrz participated in field works. Four archaeological trenches, covering an area of 76 square m, were dug. Two of the trenches yielded very few finds which occurred only in the layer of arable layer. For this reason these finds have not been taken into consideration in this report. The discussion comprises artefacts from the other two trenches III (97) and IV (98) which covered an area of more than 40 square m.

Stratigraphical data have been obtained in the investigations by M. Pawlikowski and S. Skiba. The lowest part of the profile are in the archaeological trenches are clayey, brown-yellow loesses re-deposited from the surrounding hills, which contain ferruginous concretions and carbonate concretions (layer 2). Carbonate concretions occur, as well, in some of the geological trenches. These loesses have excellent sealing properties and can favour ground water retention and the formation of water reservoirs in depressions of the ground surface and in water-logged terrains. The loesses are overlain by soils exhibiting the properties of tchernozem soils with elements of fluvial processes (layer 1a). The hydrogenic pedogenesis is emphasized by black root cast bioforms with rusty concretions which occur within the gley levels. This soil is horizontally differentiated: in some areas it has developed on more loamy formations and in some other on more strongly clayey-weathered units – depending on the degree of weathering of the underlying loess. The soil developed in a single episode (in the archaeological trenches), but in two or even three episodes (in the geological trenches). It contained archaeological finds located *in situ* and making up a culture layer. Some few artefacts have also been found at the boundary of the soil and the underlying loess. The upper part of this soil and – at the same time – the top of the culture layer have been damaged by ploughing (layer 1; Fig. 2).

The inventory consists of artefacts made by means of the chipping technique and also of stones with traces of treatment or use wear, sometimes with traces of burning. Flint artefacts are, as a rule, covered with thick, whitish patina with occasional rusty patches. The raw material for their production were mainly erratic flint, cretaceous or jurassic, obtained in the vicinity of the site. The degree of patination has caused that it is difficult to determine particular flint types and identify possible imports. A few artefacts were made from other rocks – first of all from quartzite.

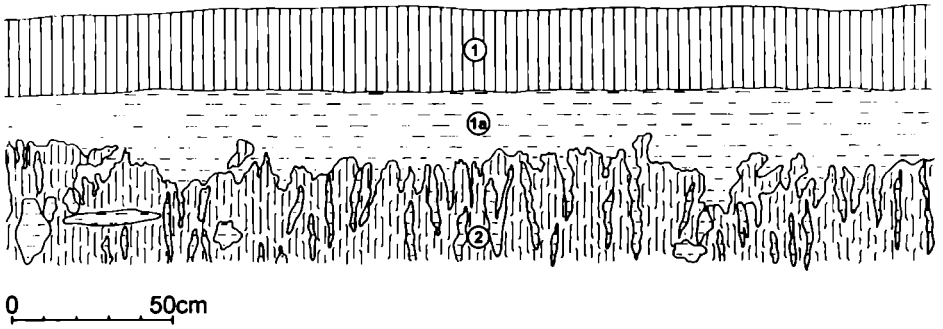

Fig. 2. Dzierżysław 35. Profile of northern wall of trench IV/98

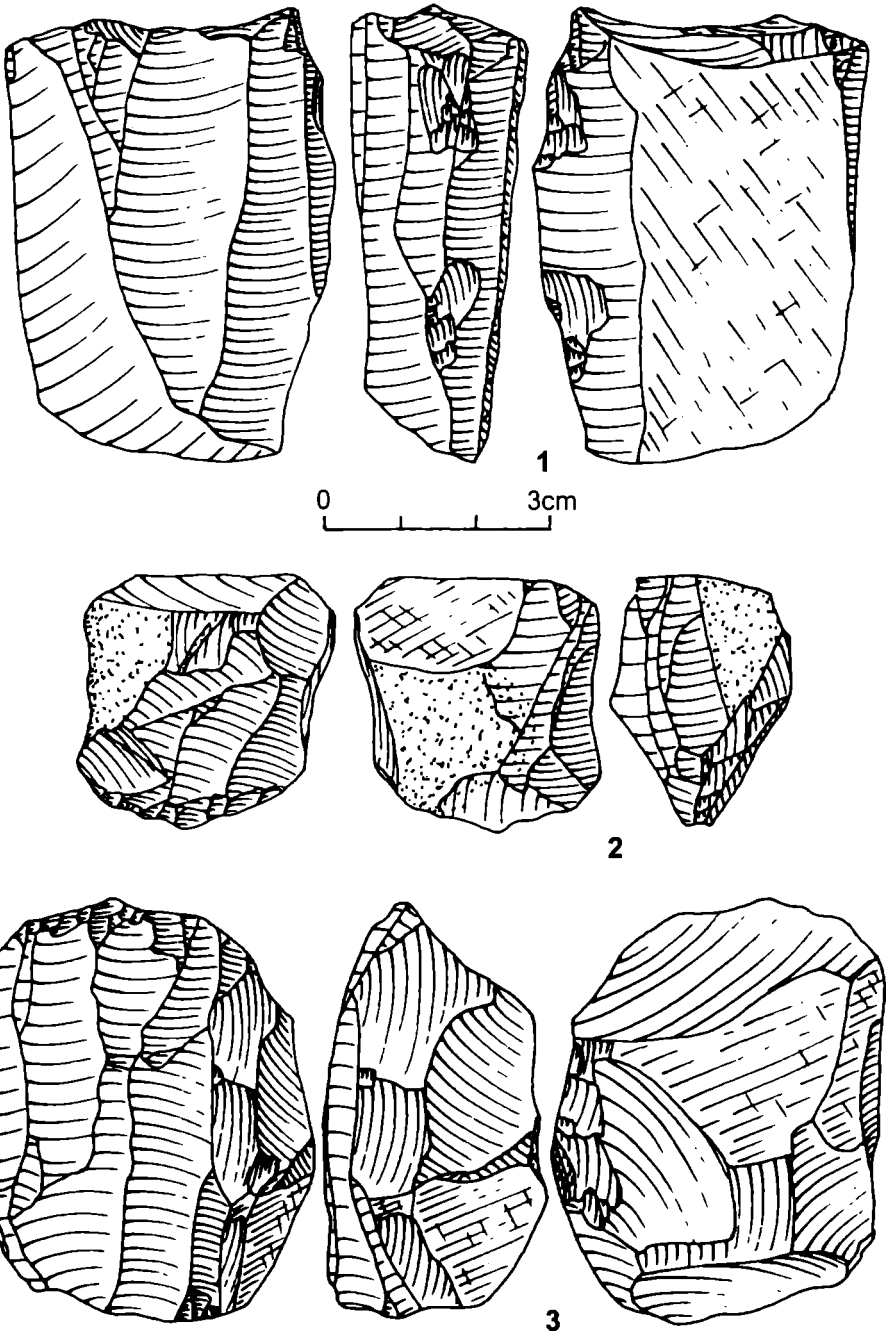

Fig. 3. Dzierżysław 35. Trench III/97. Cores

The inventory numbers a total of about 12 000 artefacts, including approximately 10 000 from intact layer 1a or its contact zone with layer 2. Only the latter artefacts have been taken into account in our analysis. These are: 208 cores, and pre-cores, more than 730 tools and numerous flakes and blades (more than 9 000 specimens), predominantly chips.

Cores are almost only blade or bladelet specimens. Forms representing various phases of reduction are present. Most frequently, however, these are residual, strongly exhausted cores, or cores discarded in the advanced phase of reduction because – often – the earlier reduction operations were unsuccessful. Pre-cores and initial forms are much fewer and their reduction is limited to detaching one or several, rather accidental, flakes. Some of these forms seem to constitute instances of "testing" the raw material. Several unworked concretions have also been found, but they were undoubtedly brought to the site to replenish the stock of raw materials. Concretions of various size were used: large as well as small; besides regular nodules there also occur cores made on irregular, randomly chosen fragments, which were discarded after detaching several flakes or blades. Single-platform cores predominate (79 specimens – 38.0%) (Fig. 3; 1); double-platform cores (Fig. 3; 3) and cores with change orientation (Fig. 3; 2) are nearly equal in number (30 and 32 specimens respectively). Besides carefully prepared forms there are cores without preparation or with preparation limited to the platform only. The use of both preparation and rejuvenation of cores is evidenced by characteristic forms identified in the inventory (primary and secondary trimming blades, overpassed blades, tablets).

Core platform are either prepared or formed by a single blow. Core with unprepared platforms are also present. In such cases the platform was the plane which was at the appropriate angle to the flaking surface. Basically, all the cores have either an acute or a straight coring angle. Flaking surfaces are usually broad, frequently one or both sides of a core. But, as a rule, they are flat which is connected with the fact that they are strongly exhausted. On the other hand, core back's were relatively rarely prepared. The cores were usually intensively exploited by detaching a series of blades or bladelets. In order to make a better use of a nodule the operation of the change-of-orientation was frequently employed (Fig. 3; 2).

Flakes are more numerous than blades. Chips, too, occur in large quantities; but their bigger concentrations occurred only in certain areas of the site. All the phases of the production cycle are represented: from preliminary preparation, through preparation phase and reduction to various types of rejuvenation. We should draw attention to the fact that cortical flakes are relatively few, which may indicate that part of the raw material was brought to the site as initially worked nodules. In addition to the large number of thin, narrow and fine blades and bladelets there are also large blades – distinctly larger than the cores recorded on the site. This suggests that some of the cores were very strongly reduced in the course of intensive exploitation. It is interesting, at the same time, that only few of large blades were retouched. The hard and the soft hammer techniques and also the punch were used. The inventory contains hammerstones and stone bases but there are no hammers or retouchers from bone. The biggest tools groups are microliths (197 specimens i. e. 26.8% of all tools), burins are slightly less frequent, represented by 175 specimens (23.8%). The next, best represented groups are retouched blades (about 14.5%) and perforators (11.9%). Other groups are much less numerous: retouched flakes are only about 5%, combined tools – 4.6%, truncations – 3.4%, notched tools – 2.4%. The minimal number of end-scrapers – 1.2% and only single examples of Kostenki type knives and side-scrapers is noteworthy. On the other hand, a relatively large group of more than 8% are fragments of indeterminate tools (Fig. 4).

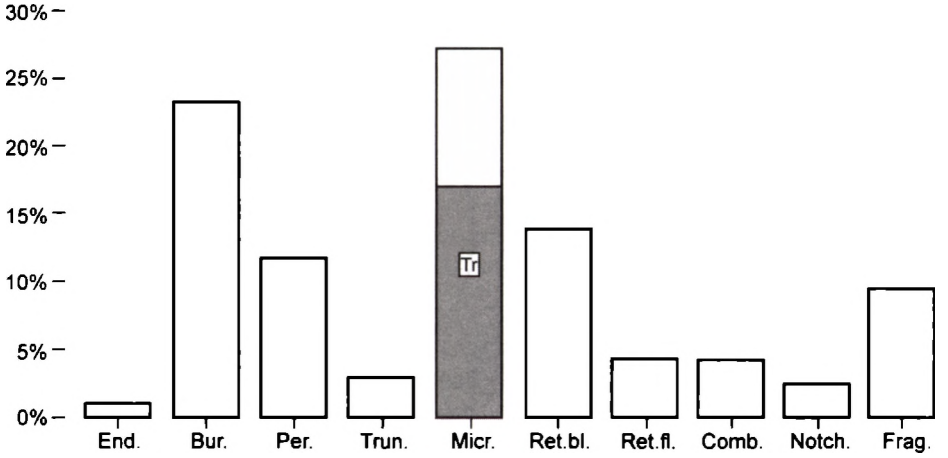

Fig. 4. Dzierżysław 35. Trench III/97 and IV/98. Frequency of particular tool groups

Backed bladelets (63 specimens) (Fig. 5; 10) have been scribed to the group of microliths. They are usually simple, less often with the retouch of the opposite edge, bladelets with retouch on the base (10 specimens) and a large number of triangles (122 specimens) (Fig. 5; 8-9, 11-12). Triangles account for 61.9% of all microliths and 16.6% of all tools. The group of triangles is differentiated: besides triangles with bilateral retouch there are also specimens with retouch on the third side sometimes denticulated. The retouch can cover the whole length or a fragment of the third side. Bases can be straight or concave, situated both in the proximal as well as in the distal part. The microliths under discussion exhibit a great variety of size and proportions. They were made on bladelets, with straight or slightly convex profiles, less often strongly convex. The retouch used in the group of microliths is standard, steep as well as fine, semi-steep or very fine, marginal.

The group of burins is dominated by dihedral burins (Fig. 5; 2) which account for nearly 50% of all burins. Other types occur less frequently namely: truncation burins (Fig. 5; 4), single blow burins, burins-on-a snap (Fig. 5; 3), flat burins, Corbiac type and Lacan type burins do not occur. The specimens are polyhedral; the latter type are found more often which is the effect of intensive retrimming of these specimens. Evidenced by the presence of numerous burin spalls.

Perforators are represented primarily by single specimens (Fig. 5; 5, 6), with short and thick tangs or long and thin ones, well distinguished. However, perforators with very long tips (Langbohrer) are absent. Multiple perforators are present, although they are rare (Fig. 5; 7), and some few Zinken type perforators have been identified.

Combined tools are represented by a variety of combinations, but the combination: end-scraper+burin and burin+perforator are most frequent. In the group of truncations the specimens with a concave, steeply retouched truncation are noteworthy; among other types the specimens with an oblique truncation predominate. The few end-scrapers in the inventory are often negligently made, with weak, irregular retouch on the fronts; Caminade type end-scrapers are also present. Sporadically, carefully made and regular specimens have been recorded (Fig. 5; 1).

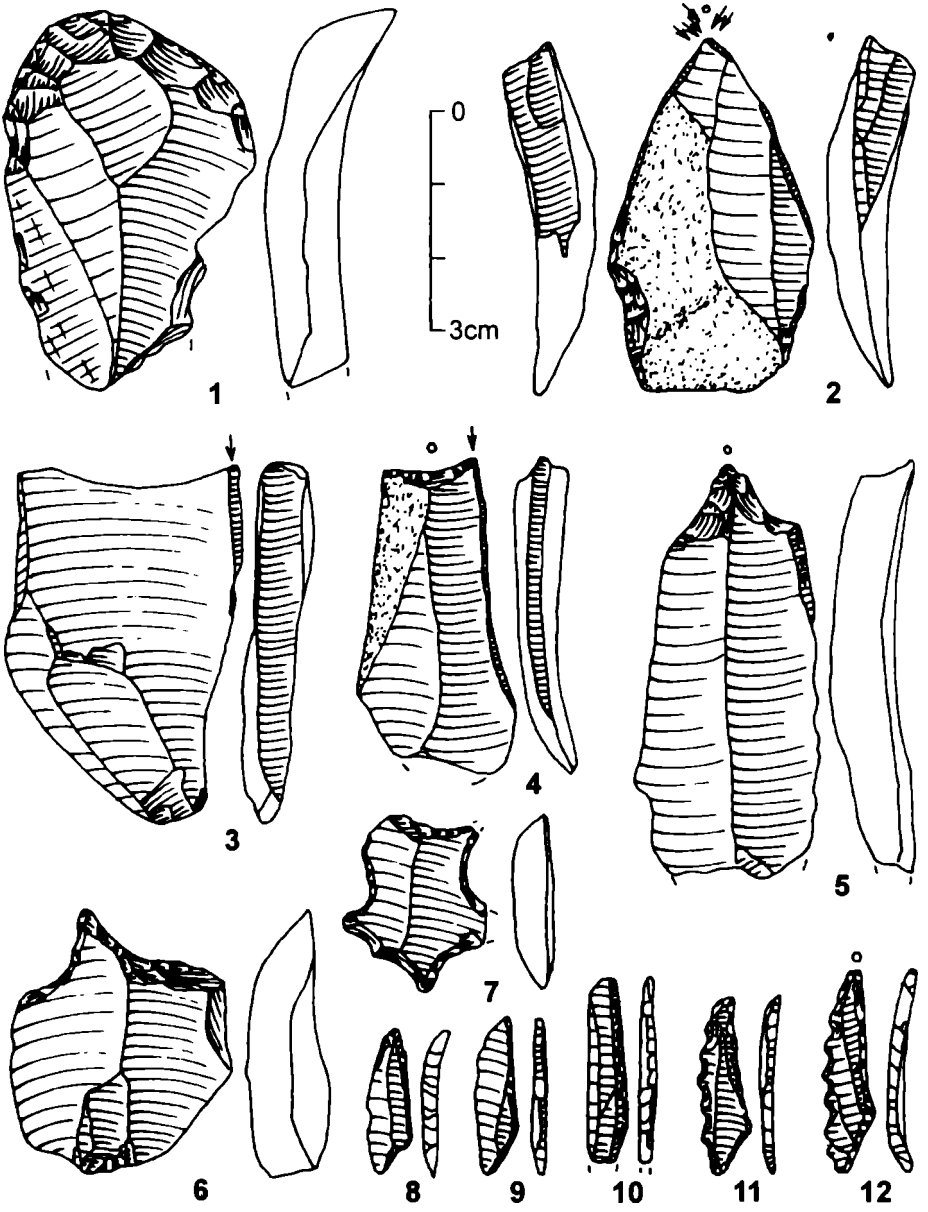

Fig. 5. Dzierżysław 35. Tools
1 – end-scraper, 2-4 – burins, 5-7 – perforators, 8-9, 11-12 – triangles, 10 – backed bladelet

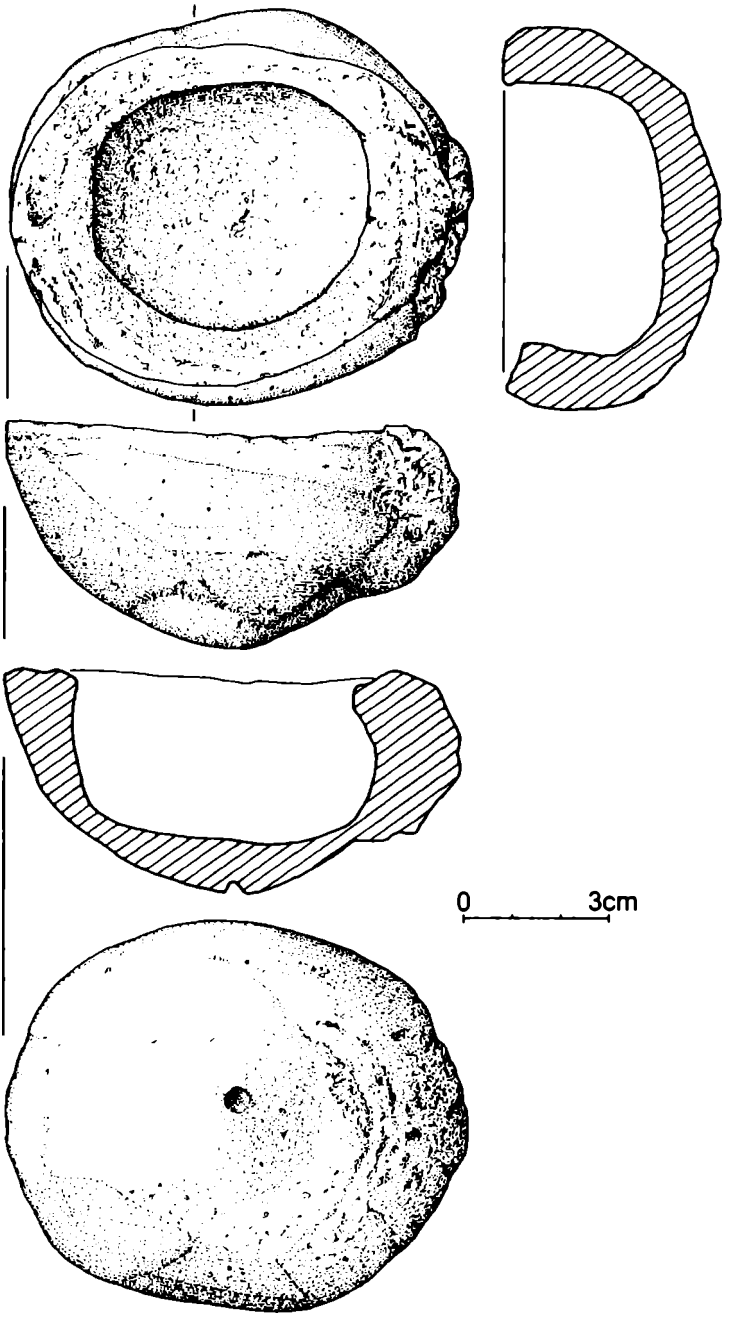

Fig. 6. Dzierżysław 35. Trench III/97 – "bowl"

Generally, the tools are carefully made, most often on blades, sometimes robust and short. Flakes were also used, including irregular flakes that were clearly waste from the early phases of core reduction. A characteristic feature of the inventory is the fact that the working parts of tools were located in the proximal parts of blanks (about 50% of all tools). The tools were retrimmed and transformed.

Within the investigated area we have established the occurrence of zones of greater intensity of archaeological materials and the presence of several concentrations (nests) of finds separated by zones almost totally devoid of artefacts. The concentrations differ in respect of size, inventory structure, the proportion of the various tool groups, the ratio of tools to cores and debitage. Flint artefacts frequently co-occur with stones bearing traces of intentional working or use, or traces of fire. There is no doubt that the concentrations correspond to various functional zones of the site. Hearths have also been identified which is evidenced by the burnt sediment and concentrations of white, strongly burnt, very fine animal bones.

A unique find is a small, deep bowl tentatively described as a "lamp" made of hematite-limonite geode (Fig. 6). The craftsman made use of the natural cracks of the geode and traces of working can be seen on the rim and outer walls of this object. Moreover, relatively numerous fragments of ochre also occur on the site. They differ in size and some are with distinct traces of crushing.

Besides the fine, burnt bone fragments mentioned above, only few, small, indeterminate bone fragments have been preserved. A mammoths tooth and remains of strongly damaged lamellae of a tooth of this mammal (investigations of P. Wojtal). The presence of a mammoth is of great importance for the discussion of the dating of the site as it indicates its age as pre-Alleröd. That the camp was settled in the cool episode of the Late Glacial is indicated by plant species identified on the basis of pollen analysis (investigations by A. Wacnik). Trees are represented mainly by pine and single pollen grains of spruce, alder and dwarf birch (*Betula nana*). Among herbs there are: grasses: *Compositae*, *Criciferae*, *Chenopodiaceae* and spores of fern and mosses (*Lycopodium clavatum*, *Lycopodium selago*; moreover, the presence of bird's nest moss (*Selaginella selaginoides*) is noteworthy as it is a diagnostic species for the Late Glacial. However, no other data have been registered that would enable us to make the chronology of the site more precise.

The characteristic features of the inventory, notably the presence of triangular microliths allow us to ascertain that the assemblage under discussion belongs to the facies with triangles of the Magdalenian. The site is the first in Poland and, at the same time, the farthest north-east site of this type. The closest analogy to Dzierżysław 35 are the materials from the open-air site of Hranice in Moravia (Klima 1951) known first of all from surface investigations. The richest assemblage in Central Europe has been yielded by the Kniegrotte Cave in Döbritz in Thuringia (Feustel 1974).

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