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PEDANTRY IN THE PALAEOLITHIC? THE STORY OF TWO SMALL SWIDERIAN PITS FROM CHEŁMNO-DOBRZYŃ LAKELAND

ABSTRACT

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The article presents a multifaceted analysis of two collections of flint products from Late Palaeolithic pits discovered during the excavations of sites Ludowice 6 (Ryńsk commune), and Paliwodzizna 29 (Golub-Dobrzyń commune). Both sites are located in the Chełmno-Dobrzyń Lake District in central Poland. The research included raw material analysis, technological and morphological analysis, studies using the refitting method, and use-wear analysis. As a result of the conducted study, it was shown that both features are most likely a remnant of refuse pits in the type of so-called waste heaps, but their detailed functional origins are different.

Keywords: Late Palaeolithic, waste heaps, Poland, Paliwodzizna, Ludowice, flint
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1. INTRODUCTION

One of the fundamental goals of contemporary Stone Age archaeology is an attempt to interpret the functions and spatial organization of prehistoric camps (*cf*. Fiedorczuk 2006, 13-17; Osipowicz 2017, 9-11 – further literature there). Studies on this issue have been conducted since the 1960s and have roots primarily in British analytical archaeology and the American "New Archaeology". They were focused on two main research issues: (1) understanding the rules governing the deposition of artefacts at sites (Yellen 1977; Binford 1978; 1983) and (2) modelling the function and mobility patterns of prehistoric communities (mainly hunter-gatherers) and the purpose of their camps (Binford 1977; 1979; 1980).

The research conducted for this article is on the border of both of these analytical trends. It take up the problem of the probable function of interesting and relatively rare cultural features occurring at sites dating back to the Late Palaeolithic. These structures are sometimes referred to as the so-called waste heaps, *i.e*., sites for the secondary disposal of garbage collected from other camp areas (*cf*. Schiffer 1976, 30; Fiedorczuk 2006, 131). Usually, they are pits with a diameter not exceeding one metre, containing many pieces of waste flint. In Poland, they have been identified at such Late Palaeolithic sites as Rydno IV / 57, Skarżysko-Kamienna comm. (Schild 1967), Poznań-Starołęka 1 and Kocierz 3, Płoty comm. (Galiński 1987, 1999; Kobusiewicz, 1999, 45-46), Rydno XI / 59, Skarżysko-Kamienna comm., Całowanie, Karczew comm. (Fiedorczuk 2006,), Trzebca II / 64 and Gojść III, Nowa Brzeźnica comm. (Ginter 1974, 54). They also occur at German sites, *e.g*., in Borneck-West near Ahrensburg (Rust 1958) or Groitzsch, distr. Leipzig (Hanitzsch 1961).

Recently, two features of this type have been identified in the Chełmno-Dobrzyń Lake District in central Poland. The first one was discovered during the excavation of the site Ludowice 6, Ryńsk comm., and the second one on the site Paliwodzizna 29, Golub-Dobrzyń comm. The purpose of this article is a multifaceted analysis of collections of flint products from these features, verifying the concept of the typical refuse origin of this type of structures. Solving this problem may be necessary for understanding the rules governing the waste management economy in the late glacial hunter-gatherer camps, which is one of the critical elements of the studies of their internal organization and function.

2. MATERIAL

The Ludowice 6 site is located in the central part of the Chełmno Lakeland (Fig. 1), on the slope of a hill with a maximum height of 100 m.a.s.l. It is placed in the contact zone of the sander and a large kettle hole, currently filled with the biogenic sediments, which are remnants of the Late Glacial and Early Holocene lake (Osipowicz 2017a, 40).

The site was discovered during surveys carried out in 1985. Excavations started here in 2009 and were conducted over five seasons. From 2011 to 2014, they were carried out as

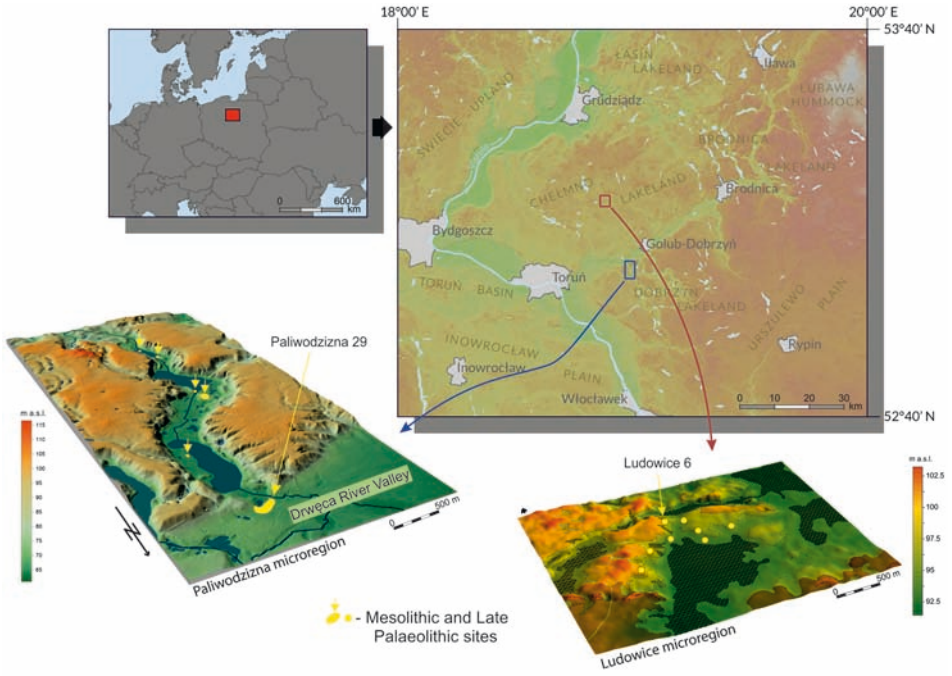

Fig. 1. Location of the sites Ludowice 6 and Paliwodzizna 29

part of the project of the National Science Centre in Kraków (NCN), entitled *Mesolithic communities of the Chełmno-Dobrzyń Lakeland. A settlement enclave in Ludowice, commune Wąbrzeźno* (project no. N N109 226140). They covered an area of 756 m², resulting in discovery of nine sedimentary layers and 30 cultural features. The group of collected artefacts included: 13,630 flint specimens, 733 products made of other stone materials, 240 bones, and a few wooden items. The vast majority of the artefacts are related to the Late Mesolithic settlement and come from the area of two large habitats from this period, located in the western and central part of the excavations area (*cf.* Fig. 2). The results of detailed studies of these sources have already been partly published (including, Osipowicz *et al.* 2014; Osipowicz 2015, 2017a, b, 2019).

The third small concentration of prehistoric artefacts was discovered in the eastern part of the site, in the vicinity of the shore of the former lake. It is related to the Late Palaeolithic settlement of the Swiderian culture and is the first of two collections of flint products analysed for this study. The cluster consists of a small flint scatter associated with the pit (Feature no. 30) – a deposit of flint artefacts (Fig. 2). Due to the weather conditions prevailing during the excavations, the result of which was the immediate drying of the explored layers and the characteristics of the soil cover at the site, it was impossible to define the boundaries and outline of the filling of this feature. However, its possible appearance

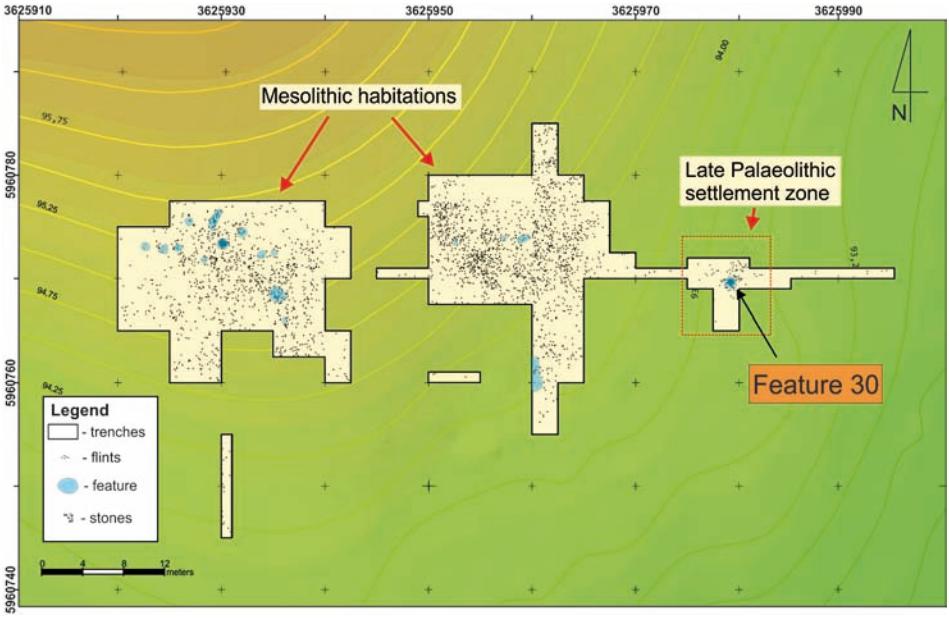

Fig. 2. Ludowice, Site 6. Location of the Feature no. 30

can be inferred from the artefact distribution, which suggests that it was a pit with a diameter of about 60 cm (Fig. 3: B), a depth of 15 cm, and a trough-shaped cross-section (Fig. 3: C). Overall, the concentration of Palaeolithic material included 344 flint products, 171 of which come from Feature no. 30.

Site Paliwodzizna 29 is located in the Drwęca River Valley, which separate Dobrzyń and Chełmno Lakelands (Fig. 1; *cf.* Solon *et al.* 2018). It lies on a flat-topped morphological ridge situated in a place where the subglacial valley of Lake Grodno and Lake Plebanka becomes the valley of the Drwęca River (*cf.* Osipowicz *et al.* 2022). It is one of the few Stone Age sites in the area subjected to archaeological research as part of the NCN project entitled: *Mesolithic communities of the Chełmno-Dobrzyń Lakeland – daily life, mobility, external contacts and relationships with the environment* (project no. 2016/23/B/HS3/00689).

The site's excavations have been underway since 2016 and have not been completed yet. During the first five years of their duration, a total area of 468.62 m² was excavated – 429.62 m² located in the sand (dry) part of the site and 39 m² in a wet part – in the shore zone of the prehistoric bay of the Lake Grodno (Fig. 4: A). As a result of the conducted work, an exceptionally rich assemblage of archaeological material was identified, which indicates that this place was used many times during prehistory. However, most of them are remnants of a multi-phase and functionally diversified Mesolithic settlement. The results of the first studies on these sources have already been published (*cf.* Osipowicz 2021; Osipowicz *et al.* 2022).

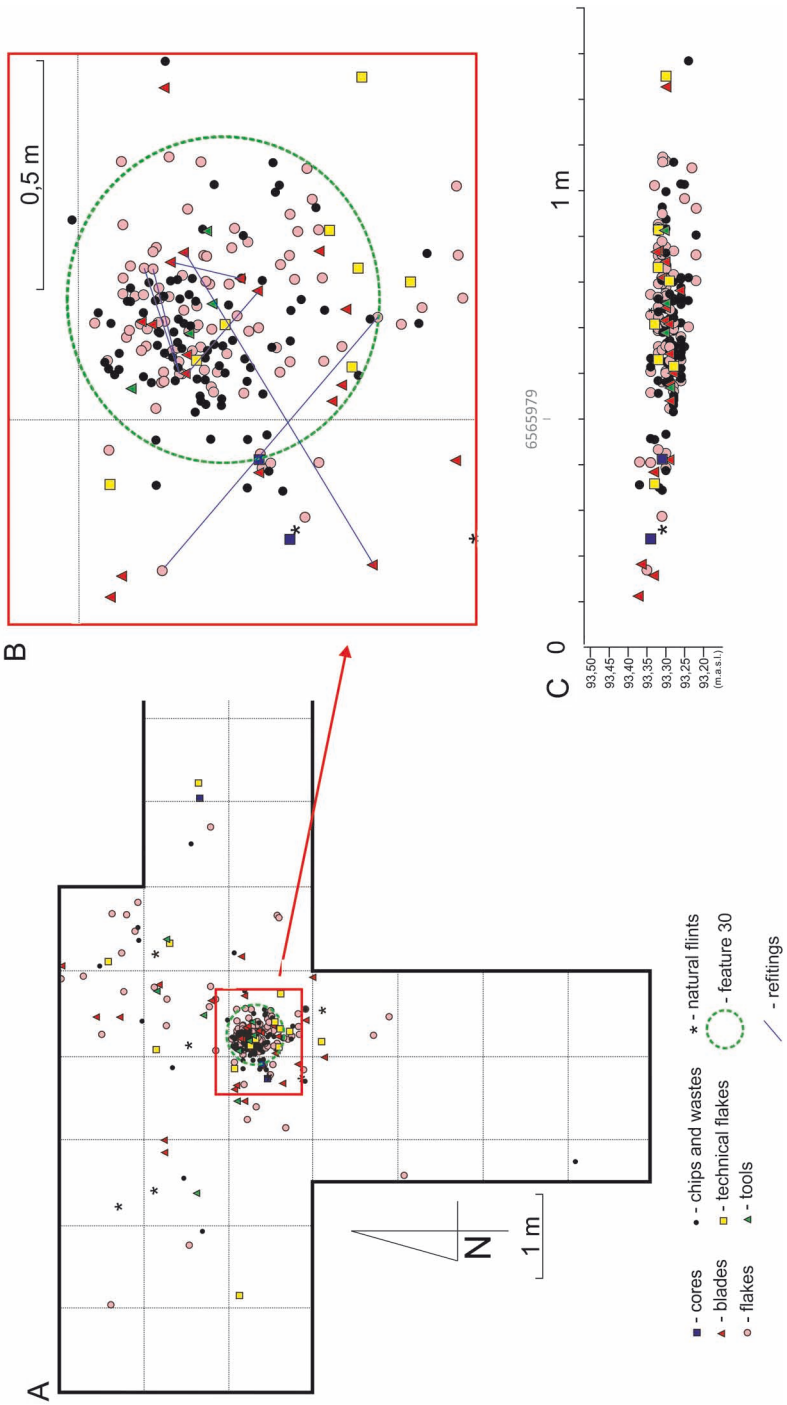

Fig. 3. Ludowice, Site 6. Distribution of the artefacts within the Late Palaeolithic flint scatter (A) and Feature no. 30 (B, C)

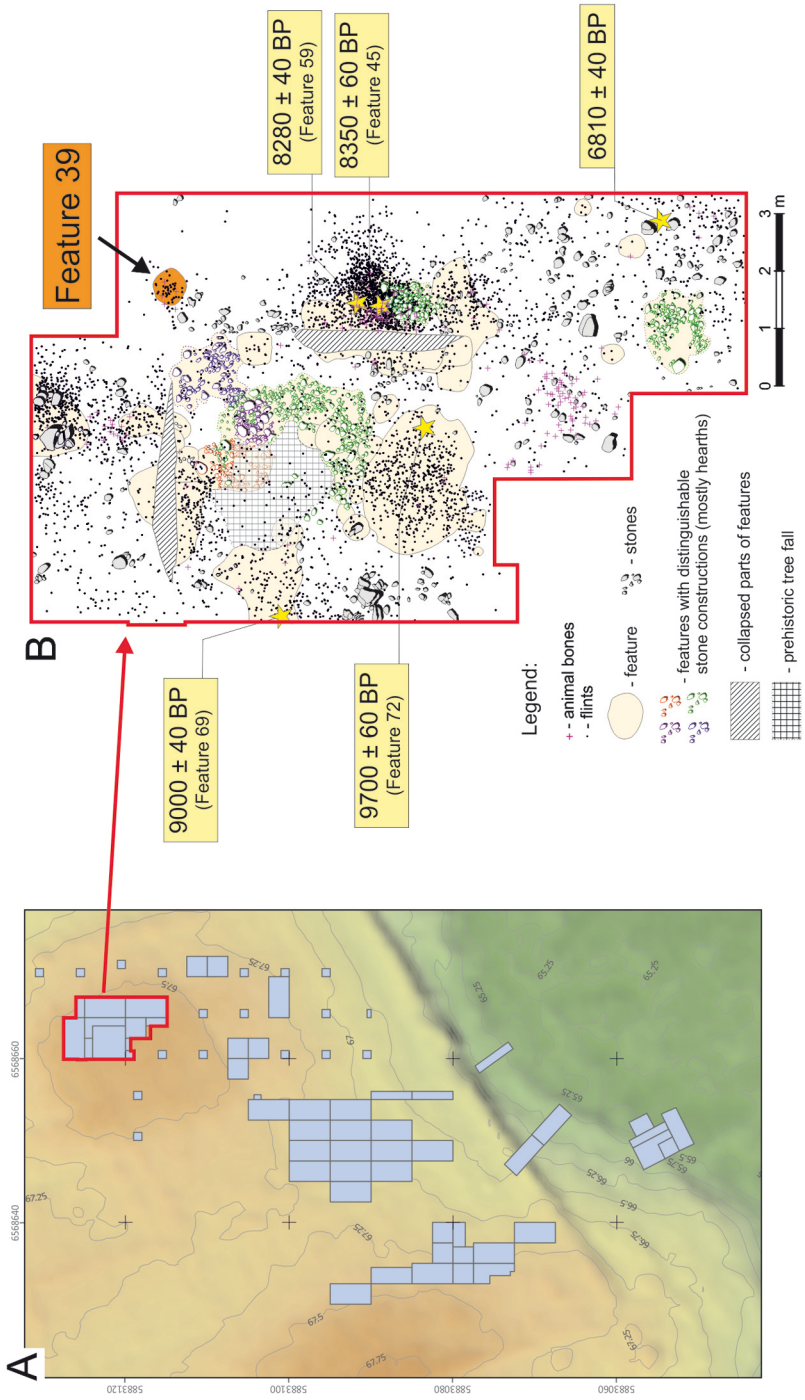

Fig. 4. Paliwodzizna, Site 29. Location (A) and details (B) of the Feature no. 39

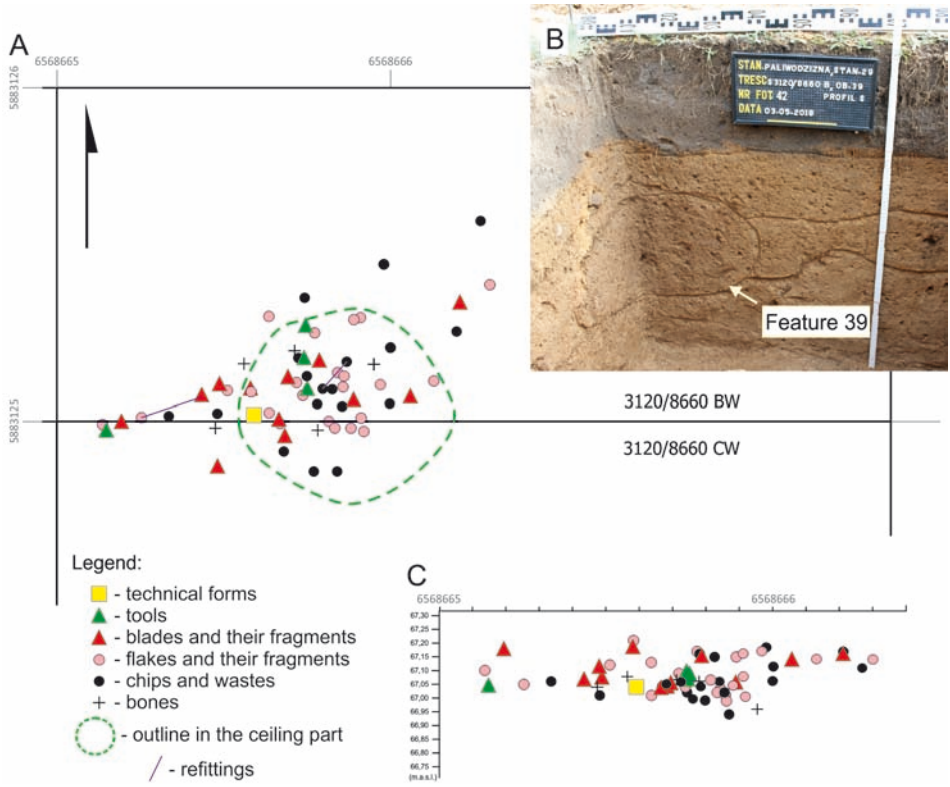

Fig. 5. Paliwodzizna, Site 29. Feature no. 39: Distribution of the flint artefacts in the horizontal (A) and vertical (C) planes. B – profiles south and west in the test trench no S3120/8660B

One of the most interesting concentrations of Early Holocene material was identified in the northern part of the area covered by the excavation, at the top of a small hill with an essentially circumferential exposure (Fig. 4: A). In addition to the undoubtedly unique sources related to the settlement of the Mesolithic hunter-gatherers (to whom independent studies will be devoted), a small refuse pit was discovered here, containing material of the Late Palaeolithic Swiderian culture (Feature no. 39 – Fig. 4: B). This structure occurred on the border of two standard excavation trenches and a test trench, making it difficult to distinguish and explore it. The outline of the feature was observed to a greater extent only in its upper parts (Fig. 5: A), and a fragmentary cross-section was documented in the corner of one of the excavation trenches (Fig. 5: B). In general, it can be stated that it was an oval-shaped pit with a diameter of about 60 cm and a depth of about 30 cm. From its filling, 59 flint products were collected, which comprise the second collection analysed for this study.

3. METHODS

The collections of flint products included in the study were subjected to raw material, technological, morphological, and use-wear analyses.

The technological and morphological analysis of flint materials was conducted based on the dynamic classification method (Schild *et al.* 1975, 12) and supplemented with studies using the refitting method (Schild *et al.* 1975, 38; Cziesla 1990; Fiedorczuk 2006). The analysis of the collection from Ludowice was made difficult by covering the artefacts with a matte "peat" patina, which in some cases even made it impossible to observe the flake ripples. This fact, combined with the significant fragmentation of products from this collection, meant that quite a few of the items in the assemblage, even relatively well-preserved specimens, were classified as undefined forms due to classification doubts. These factors probably also influenced the small number of identified blades from double platform cores. On the other hand, such a characteristic patination of the Late Palaeolithic artefacts allowed easy distinction from individual Mesolithic products occurring in their context, which are not covered with patina.

All flint finds were subjected to traceological analysis. Its initial stages were conducted using a Nikon SMZ-2T microscope and a Nikon SMZ-745T microscope with a Delta Pix Invenio 6EIII camera, the latter was used to make the microphotograph presented in Fig. 8A.

A Zeiss-Axiotech microscope-computer set with an Axiocam 105 camera was used to analyze polishes readable on artefacts from the Ludowice 6 site. The products from the site in Paliwodzizna were analyzed using a Zeiss Axioscope 5 Vario microscope with an Axiocam 208 camera. Micrographs shown in Fig. 8B-E were also taken using it. Before the use-wear analysis, the artefacts were cleaned with pure ethanol (C_2H_5OH).

The applied traceological terminology was based on the concept system existing in the subject literature (HoHo Committee 1979, 133-135; Vaughan 1985, 10-13, Glossary, p. VII; van Gijn 1989, 16-20; Juel Jensen 1994, 20-27; Korobkova 1999: 17-21; Osipowicz 2010, 24-35), which was adapted to the needs and requirements of the conducted analysis. The comparative material used was a collection of experimental tools that presently comprises about 500 specimens, located in the NCU Institute of Archaeology in Toruń.

4. RESULTS

4.1. Raw material analysis

All artefacts included in both analysed collections were made of Baltic-erratic flint. Specimens from Ludowice come from core exploitation of raw material with uniform characteristics, perhaps even one nodule. In the case of Paliwodzizna, many different types

of erratic flint were processed. Individual artefacts from Ludowice probably show signs of slight overheating, and 12 specimens from the collection in Paliwodzizna (20.3%) are heavily burned.

4.2. Technological and morphological analysis

4.2.1. LUDOWICE, SITE 6

Both sets were analysed independently to interpret the morphological structure of the collection of flint products from Feature no. 30 and the registration of differences in this respect between it and the flint scatter constituting its context.

Flint scatter (without Feature no. 30)

All technological groups are represented in the set, although there is a small number of morphological tools and a relatively large share of technical forms (Tab. 1, 2). Additionally, three natural nodules of erratic flint with a diameter of about 5 cm were discovered in the area of the flint scatter, which were not included in the tables.

Group I (preparation, and early stages of core processing) included 5.2% of the products. They are four crested blades (Fig. 6: 1), two semi-crested blades (Fig. 6: 2), and three cortex flakes.

In group II (reduction of flakes), which accounts for 27.2% of the collection, flakes removed from single platform cores dominate (53.2% of products). However, specimens coming from cores with a changed orientation are only slightly less numerous (38.3% of products in the group). In the end flakes associated with the processing of double platform cores are singular.

The structure of the III technological group (reduction of blades – 13.3% of the collection) is similar to some extent. Specimens knapped from single platform cores also predominate in this case (65.3% of products), and blades removed from double platform cores

Table 1. General morphological structure of the analysed collections of flint products

	Ludowice 6 (without feature no. 30)	% in the set	Ludowice 6 Feature no. 30	% in the set	Paliwodzizna 29 Feature no. 39	% in the set
Cores	5	2.9	-	-	-	-
Blades and their fragments	28	16.2	11	6.4	11	18.6
Flakes, wastes, chips	125	72.2	151	88.3	40	67.8
Tools	4	2.3	3	1.8	7	11.9
Technical forms	11	6.4	6	3.5	1	1.7
Total	173	100	171	100	59	100

Table 2. Ludowice, site 6. Technological structure of flint products (without feature no. 30)

Product categories	Total	%
Group I preparation, and early stages of core processing (5.2% of the set)		
Cortex flakes	3	33.3
Crested blades	4	44.4
Semi crested blades	2	22.3
Total	9	100
Group II flakes' reduction (27.2% of the set)		
Flakes from the single platform cores	25	53.2
Flakes from the double platform cores	4	8.5
Flakes from the changed orientation cores	18	38.3
Total	47	100
Group III blades' reduction (13.3% of the set)		
Changed orientation cores	1	4.3
Cortex blades	1	4.3
Blades from the single platform cores	15	65.3
Double platform cores	1	4.3
Blades from the double platform cores	5	21.8
Total	23	100
Group IV repairs (2.9% of the set)		
Secondary crested blades	1	20
Rejuvenation flakes	2	40
Platform rejuvenation flakes	1	20
Overpassed blades from the single platform cores	1	20
Total	5	100
Group V indeterminate specimens, chipping debris and retouch (49.1% of the set)		
Indeterminate cores and their fragments	3	3.5
Indeterminate blades and their fragments	7	8.2
Indeterminate flakes and their fragments	19	22.3
Chips	31	36.6
Wastes	25	29.4
Totam	85	100
Group VI tools and characteristic wastes from their production (2.3% of the set)		
Tools	3	75
Burin spalls	1	25
Total	4	100
All groups total	173	100

are the second most numerous type of product. However, blades of the second category are three times less numerous than products of the first one. The group also includes a heavily reduced double platform core with the prepared striking platforms and its back part (Fig. 6: 3), a blade core with the orientation changed several times, where apart from the "main" flaking surface, the side and back of the specimen were also reduced (Fig. 6: 4), and a cortex blade.

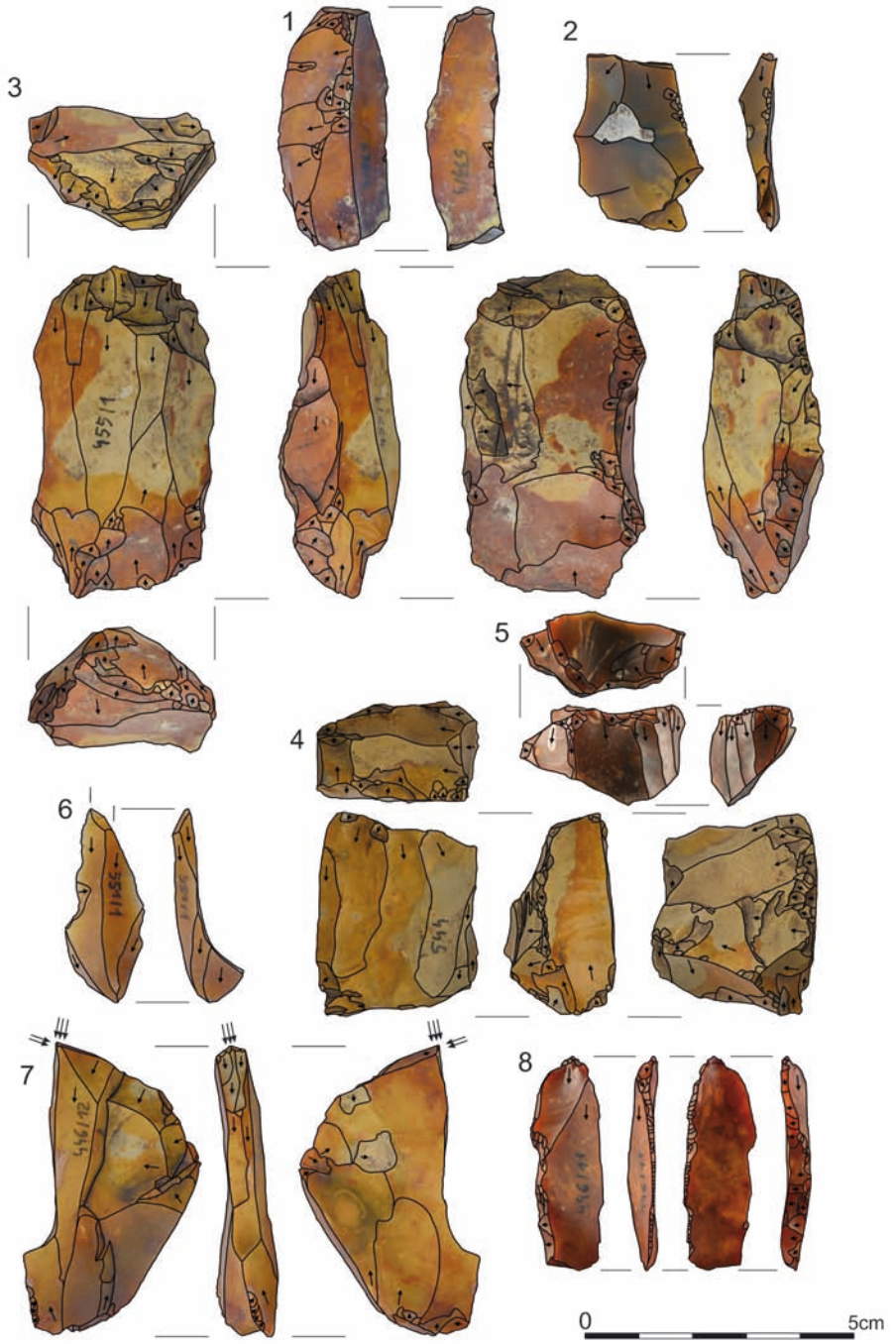

Fig. 6. Ludowice, Site 6. Selection of flint materials

The next group (IV – repairs) is represented by five forms: a secondary crested blade, two rejuvenation flakes (Fig. 6: 5), a platform rejuvenation flake, and a broken overpassed blade from a single platform core (Fig. 6: 6).

As it constitutes 49.1% of the set, group V (indeterminate specimens, chipping debris, and retouch) is the most numerous in the collection. It is dominated by chips, waste, and undefined flakes and their fragments (respectively: 36.6%, 29.4%, and 22.3% of products in the group).

The collection includes four tool forms (group VI). In addition to a small burin spall, a multiple flake dihedral burin (Fig. 6: 7), a heavily damaged single blow burin, and a semi crested blade retouched on the ventral face (Fig. 6: 8) were included. The first of the mentioned burins was most probably reutilized (in the Mesolithic?), as evidenced by the second series of burin spall scars that removes the patina characteristic for Palaeolithic products from this part of the site (Fig. 8: A).

Table 3. Ludowice, site 6, feature no. 30. Technological structure of flint products

Product categories	Total	%
Group I preparation, and early stages of core processing (5.2% of the set)		
Cortex flakes	5	55.5
Crested blades	4	44.5
Total	9	100
Group II flakes' reduction (17.5% of the set)		
Flakes from the single platform cores	19	63.3
Flakes from the changed orientation cores	11	36.7
Total	30	100
Group III blades' reduction (4.7% of the set)		
Blades from the single platform cores	4	50
Blades from the double platform cores	3	37.5
Blades from the changed orientation cores	1	12.5
Total	8	100
Group IV repairs (1.2% of the set)		
Rejuvenation flakes	2	100
Total	2	100
Group V indeterminate specimens, chipping debris and retouch (69.7% of the set)		
Indeterminate blades and their fragments	3	2.5
Indeterminate flakes and their fragments	26	21.8
Chips	60	50.4
Wastes	30	25.3
Total	119	100
Group VI tools and characteristic wastes from their production (1.7% of the set)		
Tools	1	33.4
Burin spalls	2	66.6
Total	3	100
All groups total	171	100

Feature no. 30

In the collection from Feature no. 30, waste material (flakes, waste, and chips) is dominant, accounting for almost 90% of the assemblage. Other categories of artefacts are represented to a small extent (Tabs 1, 3).

Group I (preparation, and early stages of core processing), accounting for 5.2% of the set, included four crested blades (Fig. 7: 1-3) and five cortical flakes. Group II (reduction of flakes) consists mainly of specimens removed from single platform cores (17.5 % of the products), while the remaining come from cores with orientation changed. Products connected with the reduction stage of blades constitute only 4.7% of the described assemblage. Four of the identified blades ware removed from single platform cores, three from double platform cores, and one from a changed orientation core. Group IV (repairs) consists of 2 rejuvenation flakes (Fig. 7: 4, 5). Among the tools (group VI), apart from two small burin spalls, a single burin on an overpassed blade from an opposed platform core is distinguished (Fig. 7: 6). Group V constituting 69.7% of the analysed collection (indeterminate specimens, chipping debris, and retouch), consists mainly of chips (50.4%), next to which, in similar amounts, there were indefinite flakes and waste (21.8% and 25.3% respectively).

The results of research using the refitting method

As a result of the conducted attempts of refitting the analysed material, six small blocks were obtained. One of them is a thermally cracked flake, while the others are refittings from the breaks group (Cziesla 1990, 9-10). These are: the only single blow burin mentioned above (Fig. 7: 6), three blocks of broken blades (Fig. 7: 7-9), and one broken flake (Fig. 7: 10). Although the results of these studies are not spectacular, the refittings between the flint scatter and the deposit were recorded, confirming their homogeneity.

4.2.2. PALIWODZIZNA, SITE 29, FEATURE NO. 39

The morphological structure of the assemblage is presented in Tables 1 and 4. Only one cortical flake was included in group I (preparation, and early stages of core processing). In groups II (reduction of flakes – 20.3% of the collection) and III (reduction of blades – 10.2%), specimens removed from single platform cores are dominant. There was only one blade removed from a double platform core and one flake with a changed orientation in the assemblage. The repairs group (IV) is represented by a fragment of a secondary crested blade (Fig. 7: 11).

As in the case of Feature no. 30 from the site in Ludowice, the most numerous is the group V (indeterminate specimens, chipping debris, and retouch), which constitutes 54.2% of the collection. It consists mainly of chips, waste, and flakes (respectively 37.5%, 25%, and 21.9% of the group), although fragments of undefined blades are also relatively numerous in this case.

Among the tools (group VI), apart from a large burin spall (Fig. 7: 12), there were also included: a multiple single blow burin on a flake (Fig. 7: 18), a Swiderian tanged point with

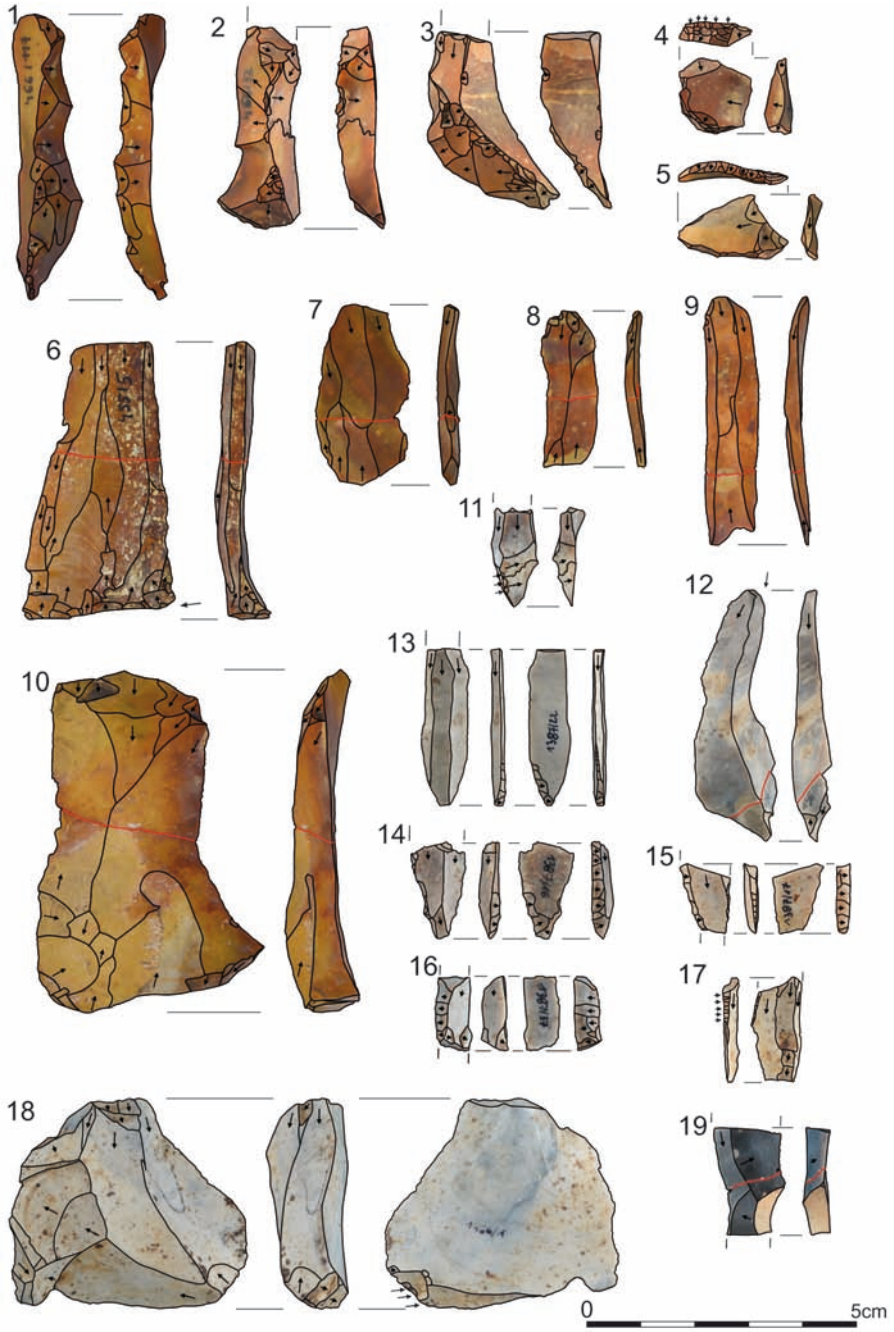

Fig. 7. Ludowice, Site 6. (1-10) and Paliwodzizna, Site 29, Feature no. 39 (11-19). Selection of flint materials

Table 4. Paliwodzizna, site 29, feature no. 39. Technological structure of flint products

Product categories	Total	%
Group I preparation, and early stages of core processing (1.7% of the set)		
Cortex flakes	1	100
Total	1	100
Group II flakes' reduction (20.3% of the set)		
Flakes from the single platform cores	11	91.6
Flakes from the changed orientation cores	1	8.4
Total	12	100
Group III blades' reduction (10.2% of the set)		
Blades from the single platform cores	5	83.3
Blades from the double platform cores	1	16.7
Total	6	100
Group IV repairs (1.7% of the set)		
Secondary crested blades	1	100
Total	1	100
Group V indeterminate specimens, chipping debris and retouch (54.2% of the set)		
Indeterminate blades and their fragments	5	15.6
Indeterminate flakes and their fragments	7	21.9
Chips	12	37.5
Wastes	8	25
Total	32	100
Group VI tools and characteristic wastes from their production (11.9% of the set)		
Tools	6	85.7
Burin spalls	1	14.3
Total	7	100
All groups total	59	100

a broken tip (Fig. 7: 13), a tang part of the analogous point (Fig. 7: 14) and three fragments of retouched blades (probably a kind of backed pieces – Fig. 7: 15-17).

The results of research using the refitting method

As a result of attempts of refitting of flint material from Feature no. 39 in Paliwodzizna, two blocks of the breaks group were obtained. The first is the burin spall mentioned above, which had a broken distal end (Fig. 7: 12), and the second is the middle part of the blade, possibly semi crested blade, broken into two parts (Fig. 7: 19).

4.3. Use-wear analysis

Microscopic research of flint products from the Ludowice collection led to identifying only one item bearing clearly legible traces of use. It is a multiple dihedral burin discovered outside of Feature no. 30 (Fig. 6: 7). On the sides of its working edge, created as a result of

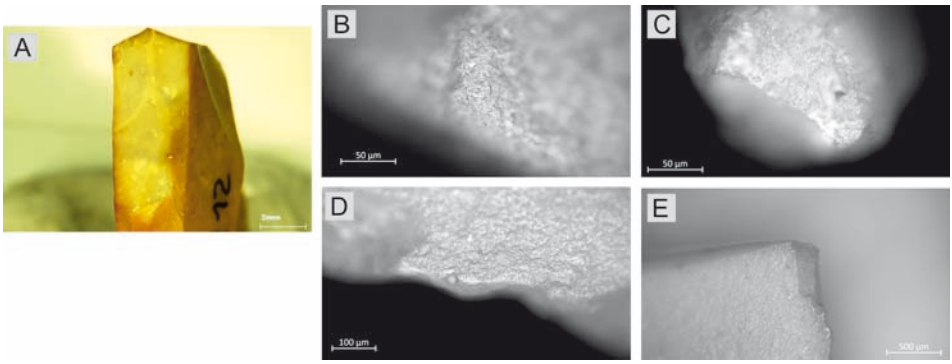

Fig. 8. The example of use-wear traces observed on burin from Ludowice (A-C) and Swiderian tanged point from Paliwodzizna (D-E)

the original (patinated) burin blows (on the ventral and dorsal face of the tool), polish with a domed topography and smooth texture was observed, clearly rounding to both the upper parts of the flint microrelief and the working edge itself (Fig. 8: B). Polish with similar characteristics (but linear) is also visible on a small fragment of the surface of the primary burin blows made on the side of the flake (Fig. 8: C). The negatives of the secondary burin blows made here, which removed the "palaeolithic patina" show no signs of use. The specimen was probably used for carving in wood or (possibly) antler.

In the collection from Site 39 in Paliwodzizna, four specimens with probable traces of use were identified. However, only in the case of one of them, was damage caused by usage clearly legible and it was possible to confirm its use with high probability. This specimen is a broken Swiderian tanged point (Fig. 7: 13). An irregular use retouch is visible on both faces of its side edges. It is built from the singular feather terminated scars. Next to it, a bright abrasive polish with flat topography and smooth texture is present (Fig. 8: D). The fracture visible at the tool's tip is a typical bending fracture with the microburin spalls (Fig. 8: E). The described traces of use indicate that the product was used as an arrowhead.

The remaining artefacts with probable use-wear are preserved in small fragments or bear poorly developed traces, which makes further functional interpretations impossible.

DISCUSSION

The results of the analyses to which flint products from both analysed pits were subjected seem to confirm that they are typically refuse structures, probably of the "waste heaps" type. According to the definition of this type of feature, the morphological structure of both included collections is dominated by waste material. There are no blades or flakes useful in terms of tools visible here. In both cases, studies using the refitting method showed

the absence of blocks from the core exploitation process, which indicates that the flint material deposited in the features could have been collected from a larger area and/or could be the result of several acts of knapping (or one more complex activity of this type).

However, the two analysed collections are also quite different. Feature no. 30 from Ludowice appeared in the context of a flint scatter, with which it is homogeneous and probably functionally connected. However, the morphological and functional structure of these two sets is different. In addition to waste material, both contain technical forms, but the flint scatter also includes cores and an artefact used as a tool, which are missing in Feature no. 30. The functional relations between the two structures seem therefore to be quite clear. The flint scatter should be considered as a place of short-term flint knapping and occasional processing of organic raw materials (type OEA; *cf*. Osipowicz 2017a, 32; 2017b). Feature no. 30 is a refuse pit in which the waste from flint knapping carried out within the flint scatter (and possibly in other places) has been deposited. In the opinion of the manufacturer, these materials were unsuitable for further processing or tool use, and the flint products that met these criteria were taken outside the camp.

The characteristics of Feature no. 39 from Paliwodzizna and the collection of artefacts found in it are different. First of all, this feature occurred without the context of a flint scatter or other Late Palaeolithic structures, which perfectly fits the definition of waste heaps (*e.g*., Binford 1978, 346, 347; Stapert 1989, 7). The material collected from its filling is not as abundant as in Ludowice, but it seems to be much more diverse. As shown by the results of use-wear analysis, it contains a statistically significant amount of used (or probably used) forms and a relatively large number of burnt flints. These products are also preserved in small fragments, confirming their waste nature. Taking all of this into account and considering the general technological structure of the collection of flint products from the feature, it can be concluded that it is not a remnant of flint processing only, as was the case with Ludowice. It was most likely created as a result of "cleaning" the usable space of the residential structure (a hut with a hearth or an open hearth – hence the burning of some artefacts), where the core exploitation process was repeatedly carried out (the collection includes products from various types of erratic material), but also other economic activities were performed. The high fragmentation of this material indicates that it was subjected to quite a long period of trampling, which also supports the above suggestions. This type of waste pit has already been written about in the context of Late Palaeolithic materials (Fiedorczuk 2006, 131).

CONCLUSIONS

In summary, both the pits producing the material analysed here were were most likely features in the type of waste heaps. In the case of the observed discrepancies between them, it should be clearly emphasized that the genesis of this type of structure may be

much more complicated than it currently seems. Many issues remain unclear already in the case of the analysed pits. Why waste, flakes, and even chips were deposited in Feature no. 30 in Ludowice, but not the cores or the burin dropped at a short distance from it? What is the origin of such a selection in "cleaning" the surroundings? Why was such highly fragmented material collected in Paliwodzizna, and why was it deposited in an independent pit? Was this only due to the kind of "pedantry" of camp users (as stated in the title of the article) or maybe from something more? The literature on the subject sometimes mentions the ritual profile of such features (Rust 1958, 68; Schild 1967, 201). The filling of the Ludowice pit was identical to the layers constituting its context. Still, in the case of the feature from Paliwodzizna, it had a little different, slightly pinkish colour. This could indicate the presence of ochre in the feature, but no samples were taken to confirm this by chemical analysis. Undoubtedly, the final solution to the problem of Late Palaeolithic waste heaps requires further research. Of critical importance to this problem may be the use-wear analysis of flint products derived from such features and multifaceted and interdisciplinary studies of their fillings. These issues should be considered as the main research postulates in this regard for the near future.

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