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# The early Bronze Age feature from Wilczyce, site 10, Sandomierz district – An interpretation of its functioning in light of multidimensional analysis

## Abstract

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The aim of this paper is to present the multidimensional characteristics of the feature number 4 at the site in Wilczyce located on the Sandomierz Upland. During exploration of the pit rich flint material, fragments of pottery vessels and animal bones were found and just above the bottom a "deposit" involved a human skull of the young female, two cattle mandibles, a sheep/goat tibia and astragalus, a damaged cattle scapula and radius, and a polishing stone were deposited. The $C_{14}$ date obtained from the tooth from the cattle jaw was 3790 ± 35 BP. Based on the shape and the size of discovered feature it is possible to classify it as a typical storage pit but presence of "deposit" enable to postulate a ritual character of assemblage that reflect some kind of burial practices of the Mierzanowice culture. Rituals in the form of interring the dead or parts of their bodies can be found also in the Unietice culture so such features may indicate the emergence of a certain supra-regional and cross-cultural trend in the early Bronze Age

**Key words**: Mierzanowice culture, Sandomierz Upland, funeral rite, settlement feature

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## Introduction

The site in Wilczyce, located on the Sandomierz Upland (Fig. 1: a), was discovered in 1994 during a field survey carried out as a part of the Polish Archaeological Record (*Archeologiczne Zdjęcie Polski*) project by H. Kowalewska-Marszałek from the Institute of Archaeology and Ethnology of the Polish Academy of Sciences (Kowalewska-Marszałek and Włodarczak 2002, 21). It was marked as site number 10 and is situated at the top of the slope of a loess hill that rises directly above the Opatówka River valley. Detailed information about the history of archaeological investigations, the geomorphology of the hill and the loess sedimentation were presented in the monograph of the Magdalenian culture settlement published in 2014 (Schild 2014) and in separate papers (Bałaga *et al.* 2008). In addition, during the subsequent excavations, archaeologists discovered numerous features from the Neolithic period, both associated with the occupation of the site and of a funerary nature (Fig. 1: b; Boroń 2013; 2017; Włodarczak *et al.* 2016). The research was financed by the Voivodeship Heritage Protection Office (*Wojewódzki Urząd Ochrony Zabytków*) in Kielce, the Institute of Archaeology and Ethnology of the Polish Academy of Sciences in Warsaw, and Karpacka Spółka Gazownictwa sp. z o.o. – Sandomierz Division. The aim of this paper is to present the multidimensional characteristics of the feature labelled as number 4, which allows us to formulate hypotheses concerning its purpose and its functioning.

## The structure of the feature

The feature was discovered under an arable layer, approximately 40 cm below the ground surface. In its maximum range, it had a circular shape with a diameter of 2 m and depth of 1.2 m, with almost vertical walls and a slightly bowl-shaped bottom. The upper part of the fill constituted a homogeneous dark soil that gradually turned into light grey layers mixed with layers of yellow loess (Fig. 2).

A human skull was discovered approximately 1 meter below the ceiling of the feature – placed next to its wall, with two cattle mandibles on the left and

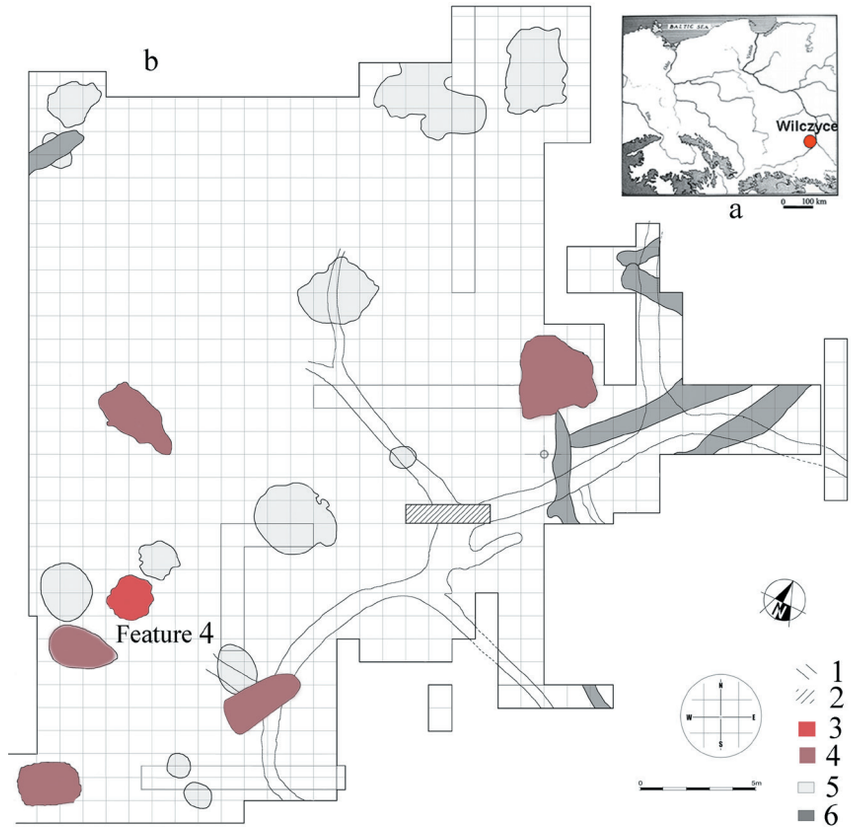


**Fig. 1.** a – geographical location of Wilczyce, Sandomierz district, site 10; b – plan of the trench; 1 – ice wedge cast; 2 – unexcavated area with settlement materials of the Magdalenian culture (balk); 3 – funeral feature of the Mierzanowice culture; 4 – feature of the Corded Ware culture; 5 – other Neolithic features; 6 – WWI trenches (according to Schild 2014, 88, with supplementary information by T. Boroń)

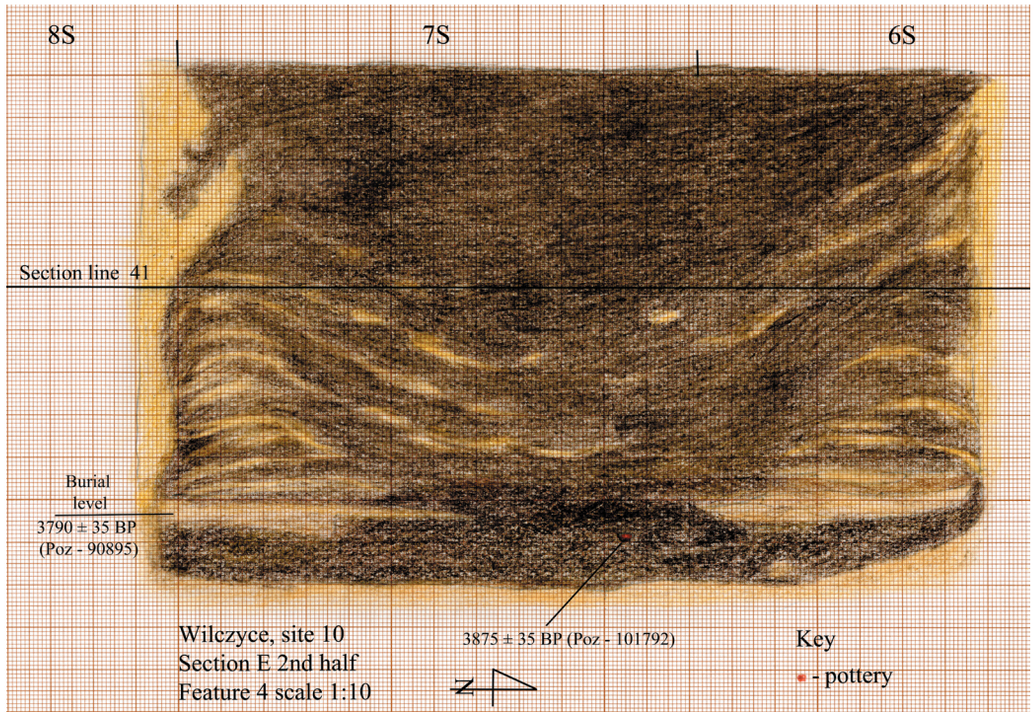


**Fig. 2.** Wilczyce, Sandomierz district, site 10. Cross-section of feature 4, with the indication of places from which samples for the $C_{14}$ dating were taken. Drawing by E. Gumińska (digitally remastered by A. Sołodko)

a sheep/goat tibia and astragalus, a damaged cattle scapula and radius, and a polishing stone. Next to the wall, on the north-western side, another stone was discovered (Fig. 3). The $C_{14}$ date obtained from the tooth from the cattle jaw was 3790 ± 35 BP (Poz-90895). Below the "deposit" consisting of human and animal remains, archaeologists also recorded a dark layer of soil between 20 and 25 cm thick. The radiocarbon date obtained for the charcoal discovered in that layer was 3875 ± 35 BP (Poz-101792). Radiocarbon dating was financed from the National Science Centre (NCN) grants number 2014/12/S/HS3/00355 and 2016/20/S/HS3/00307.

The exploration of the pit yielded rich flint material, fragments of pottery vessels and animal bones, which were present both below and above the level on which the human skull was discovered.

## Archaeological material from the fill of the feature

### Flints

During the exploration of the feature, archaeologists discovered around 500 flints, including three splintered pieces, 130 flakes, ten blades, 18 tools, one burin spall, and several hundred chips and flint waste.

Splintered pieces. Three specimens were identified. They are bipolar forms and forms with one pole with a flat cross-section (Fig. 4: 1–3). Dimensions of the splintered pieces and tools are presented in Table 1.

Flakes. The assemblage consists of 130 specimens (Fig. 4: 4–13; 5: 1–5), of which 94 belong to scar categories. The remaining ones are cortex, partly cortex and natural forms. 26 flakes have two-directional and multidirectional scars and 90 have one-directional scars. The majority are flakes with smooth butts (55 specimens). The second-largest group are specimens with prepared butts (23 specimens). The remaining types of butts: cortex, dihedral, natural, linear and punctiform butts were identified on 45 specimens.

The greatest concentration of points indicating the size of the flakes falls into the length range between 10 and 30 mm, with a width of 10 to 32 mm. In the case of thickness, they ranged between 2 and 6 mm with a width between 13 and 40 mm (Fig. 6).

Blades. That group includes eight whole specimens and two top fragments. Their length ranges from 25 to 70 mm. They usually have an irregular outline and sometimes are slightly twisted in the longitudinal cross-section (Fig. 5: 6–11).

Sidescrapers. Only one such artefact was recorded. Regular edge retouching is present on the transverse and lateral edges (Fig. 7: 4).

**Table 1.** Wilczyce, Sandomierz district, site 10, feature 4. Classification of tools.

| Inventory category | Length in mm | Width in mm | Thickness in mm | Raw material | Figures |
|---|---|---|---|---|---|
| Splintered piece | 27,5 | 40 | 7,5 | Świeciechów flint | 4:1 |
| Splintered piece | 32,3 | 15 | 5,2 | Świeciechów flint | 4:2 |
| Splintered piece | 13 | 7,3 | 3 | Świeciechów flint | 4:3 |
| Sidescraper | 37 | 60 | 6,5 | Świeciechów flint | 7:4 |
| Endscraper | 63 | 37 | 5,5 | Świeciechów flint | 7:1 |
| Endscraper | 17,5 | 20 | 5 | Świeciechów flint | 7:6 |
| truncated blade | 40 | 17,5 | 4 | Chocolate flint | 7:2 |
| truncated blade | 28,5 | 6 | 3,5 | Świeciechów flint | 7:3 |
| Borer | 30 | 35 | 7 | Świeciechów flint | 7:7 |
| Notched tool | 15,5 | 28 | 3,5 | Świeciechów flint | 7:5 |
| Retouched blade | 30 | 36 | 8,5 | Świeciechów flint | 8:1 |
| Retouched blade | 46 | 14,5 | 5,5 | Chocolate flint | 8:2 |
| Retouched blade | 35 | 32,5 | 8,5 | Świeciechów flint | 8:12 |
| Retouched flake | 46,6 | 35,8 | 6,5 | Świeciechów flint | 8:5 |
| Retouched flake | 43,2 | 54,6 | 8,4 | Świeciechów flint | 8:10 |
| Retouched flake | 27,4 | 24 | 4,2 | Świeciechów flint | 8:3 |
| Retouched flake | 32,3 | 35,8 | 9,8 | Świeciechów flint | 8:8 |
| Retouched flake | 30 | 28,6 | 5,8 | Świeciechów flint | 8:7 |
| Retouched flake | 21,3 | 33,5 | 5,3 | Świeciechów flint | 8:6 |
| Retouched flake | 28,3 | 16,8 | 5,6 | Świeciechów flint | 8:4 |
| Others | 33,2 | 22,6 | 13,6 | Świeciechów flint | 8:11 |
| Burin spalls | 28,5 | 6 | 3,5 | Świeciechów flint | 8:9 |

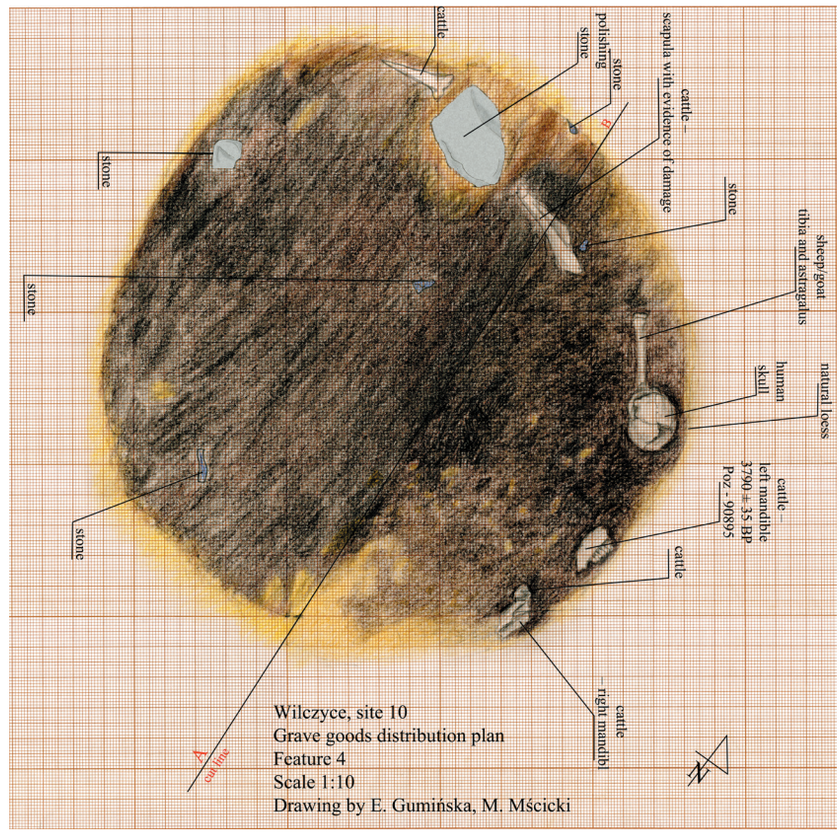


**Fig. 3.** Wilczyce, Sandomierz district, site 10, feature 4. Plan showing the spread of artefacts in relation to the location of the skull. Drawing by E. Gumińska, M. Mścicki (digitally remastered by A. Sołodko)

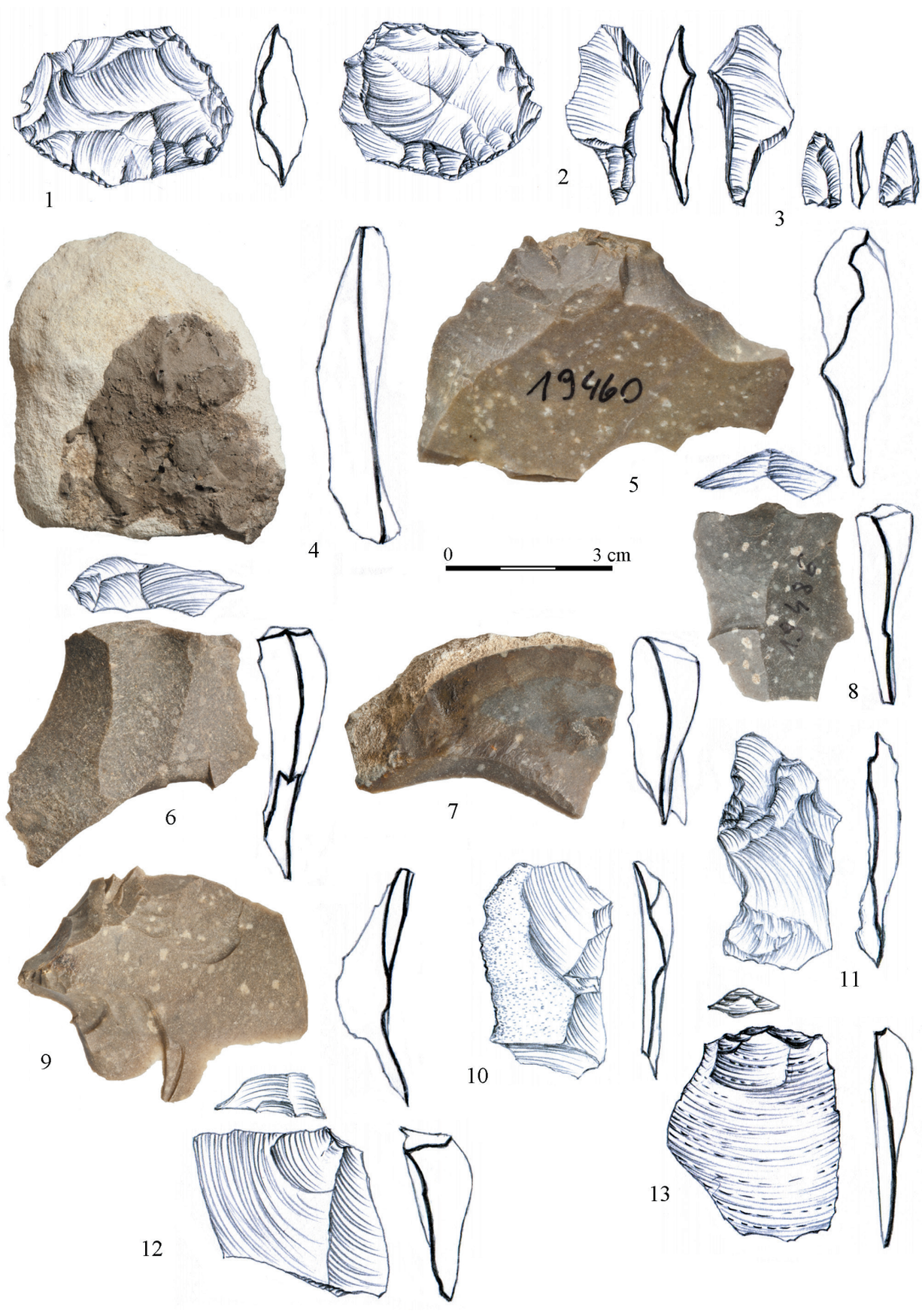


**Fig. 4.** Wilczyce, Sandomierz district, site 10, feature 4. Flint material from the backfill of the feature.
Photo by M. Osiadacz, drawing by E. Gumińska

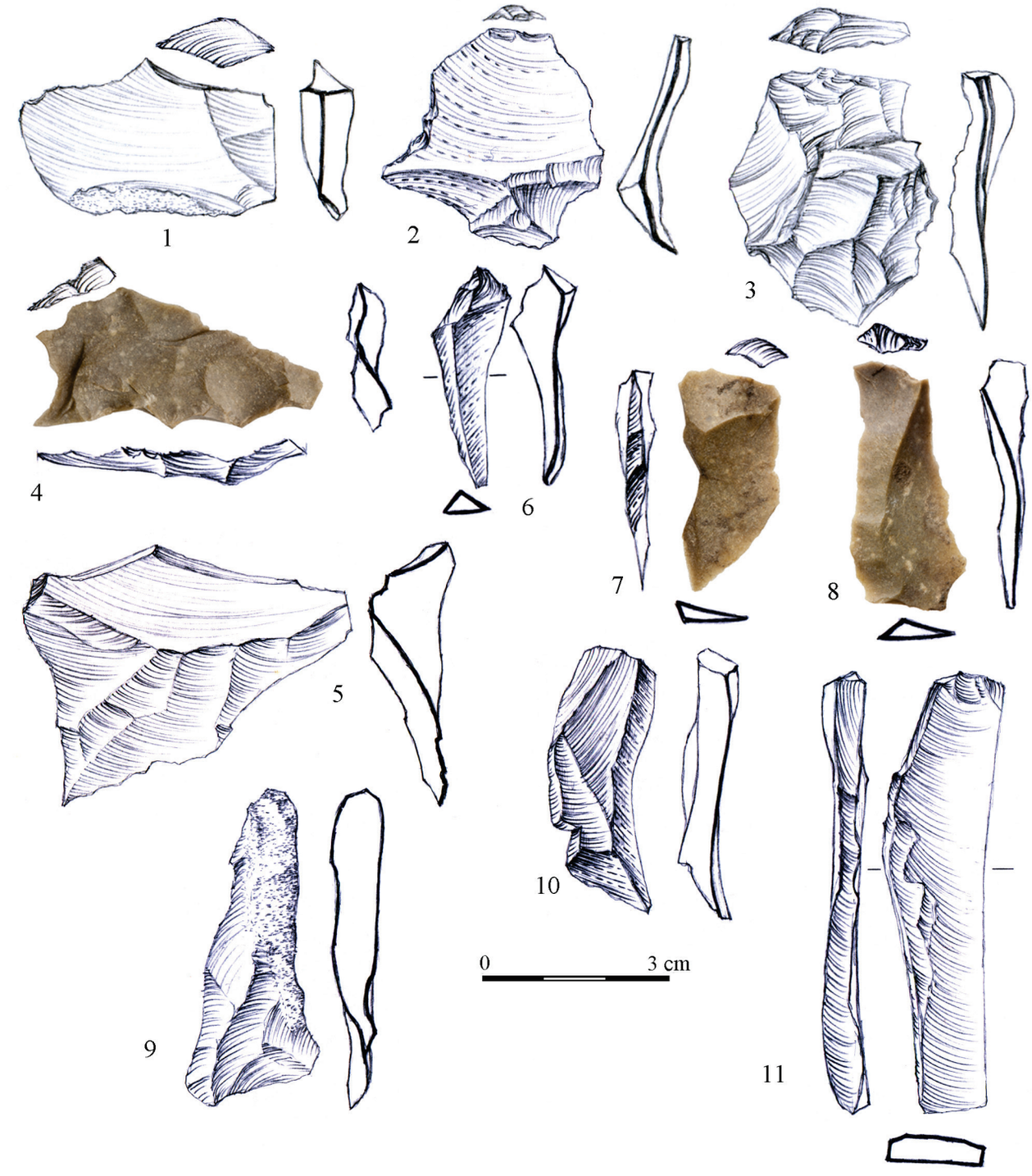


**Fig. 5.** Wilczyce, Sandomierz district, site 10, feature 4. Flint material from the backfill of the feature.
Photo by M. Osiadacz, drawing by E. Gumińska

Endscrapers. Two specimens made from blades were identified. The first one is made from a large and chunky semi-raw material, and in addition, it has a retouched notch on the lateral edge (Fig. 7: 1), whereas the second specimen, with a rounded endscraper front, was made from a blade with regular sides (Fig. 7: 6).

Truncated blades. Two specimens were identified. They were made from a blade of semi-raw material. In the case of the first one, the truncation was formed with a regular semi-abrupt retouching (Fig. 7: 2), while the other one has a fine edge retouching (Fig. 7: 3).

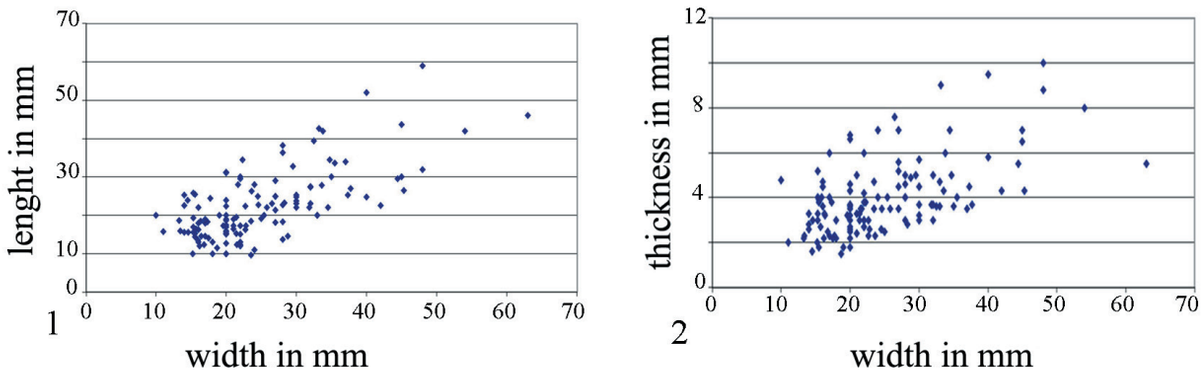


**Fig. 6.** Wilczyce, Sandomierz district, site 10, feature 4. Metric diagrams of flakes
Processing by T. Boroń.

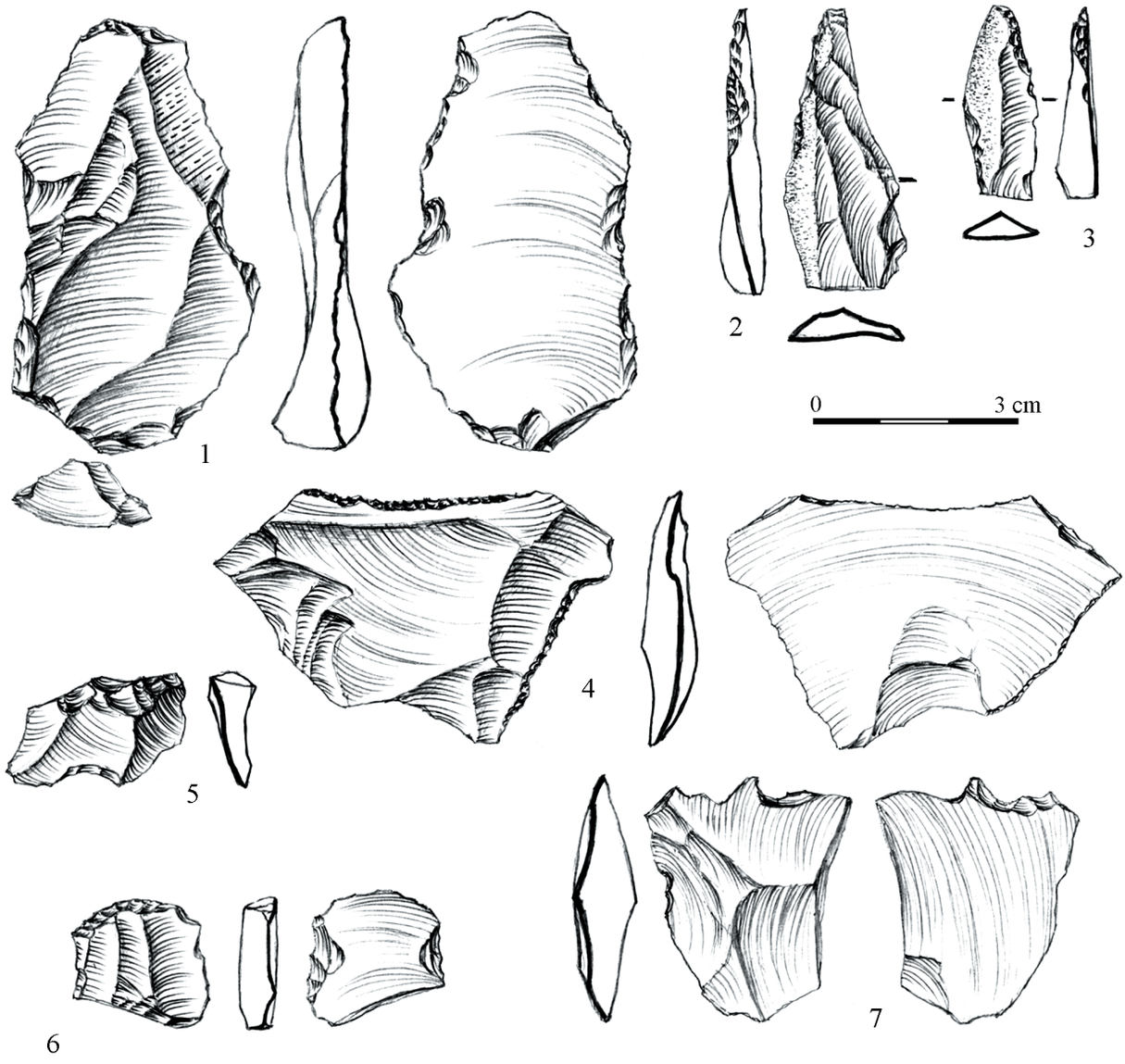


**Fig. 7.** Wilczyce, Sandomierz district, site 10, feature 4. Flint material from the backfill of the feature.
Drawing by E. Gumińska

Borers. There was only one specimen. The sting was formed with an abrupt retouching on the lateral edge of the blade (Fig. 7: 7).

Notched blades. One such specimen made from a flake was identified. The notch was formed with an abrupt retouching on the dorsal surface (Fig. 7: 5).

Retouched blades. There were three artefacts – one complete and two fragments. The retouching covers small sections of the edges and its abrupt, along the edge and flat (Fig. 8: 1–2, 12).

Retouched flakes. Seven specimens were identified. Their length ranges from 17 to 46.5 mm and the width from 14 to 54 mm. Edges are usually finely and irregularly retouched – less often abruptly retouched (Fig. 8: 3–8, 10).

Miscellaneous. Only one specimen was allocated to that category. It is a form with a plano-convex cross-section and a bifacial flint work on the dorsal surface. The base is oblique, while the sides are slightly arched (Fig. 8: 11).

Burin spalls. One waste was recorded (Fig. 8: 9).

Except for four specimens, (three made from chocolate flint and one from Jurassic flint), all remaining artefacts were made from Świeciechów flint. Taking into consideration the small distance between the site and the deposits of that raw material, this seems more than justified (Balcer 1971; 1975; Libera and Zakościelna 2002). However, as evidenced by studies on the use of the flint material on the Sandomierz Upland, the increase in the percentage of Świeciechów flint in the inventories from the Late Neolithic is a visible tendency (Kowalewska-Marszałek 2002).

Discoveries of that raw material are characterised not only by the number of specimens, but also larger size compared to the chocolate and Jurassic flint specimens – the length of the latter does not exceed 2.5 cm.

The largest group of finds retrieved from the fill of the discussed feature are made up of flakes. Many have technical properties such as dihedral butts, two- and multidirectional scars, and in particular, those correcting lateral surfaces and the broad side of the axe (Arnold 1981; Hansen and Madsen 1983, 53; Kopacz and Pelisiak 1988; Valde-Nowak 1994; Sałaciński and Migal 1997, 342; Mitura 2007; Boroń 2017).

During the experimental production of four-sided forms, researchers also removed blades characterised by specific parameters (Migal and Sałaciński 1996, 126) as well as those that can be referred to as pseudo-crested blades (Haßmann 2000, 137). Similar forms were identified in the assemblage of finds from feature 4 (Fig. 5: 6–8), whereas the blade presented in figure 5: 11 was removed from the lateral side of the axe. Only a few specimens indicate potential intentional blade exploitation (Fig. 5: 9).

We may almost certainly rule out the suggestion concerning the presence of technical forms indicating the preparation of blade cores, as the analysed material does not contain any evident examples of the blade semi-raw material from regular core exploitation.

Tools were produced mainly from large and chunky semi-raw material having a thickness of over 4 mm (Fig. 9).

It seems that, based on the description and the characteristic of the flakes and individual tools, the entire flint material represents a morphologically and technically homogeneous assemblage of artefacts. This is important since there are significant differences in the obtained $C_{14}$ dates for the fill of the feature and the burial. The cultural uniformity of the finds is primarily stressed by the presence of flakes removed during the production of four-sided axes.

Of course, one could also consider the possibility of the production of bifacial bilateral tools. However, in such a case the flakes are usually fan-shaped and are slightly arched (Fouéré and Fourloubey 2012, 62; Grużdź 2012, 24).

Only the tool with the bifacially treated dorsal surface can be rather clearly linked to the early Bronze Age occupation of the site.

## Functional analysis of selected flint artefacts

Selected flint artefacts discovered during the excavations of feature number 4 were subjected to microscopic analyses. Studies aimed at identifying the function of specific artefacts were conducted in relation to 17 flint tools and three splintered pieces.

Observations were performed with a stereoscopic and metallographic microscope using enlargements ranging from several to several hundred times. All identified transformations in the form of damage, wear, rounding, or burnishing were the basis for determining whether a specific find was used or not.

The conducted observations indicated the presence of microwear in the case of eight specimens. The first endscraper (Fig. 10: 1; 11: 1) has wear marks and burnishing that indicates its use for scraping hides. The retouching and burnishing visible on its side edges are the result of mounting it in a haft. The second endscraper (Fig. 10: 2; 11: 2, 3) has broken off pieces and retouching on both lateral edges that were used for processing bone or antler. In the case of the borer, no

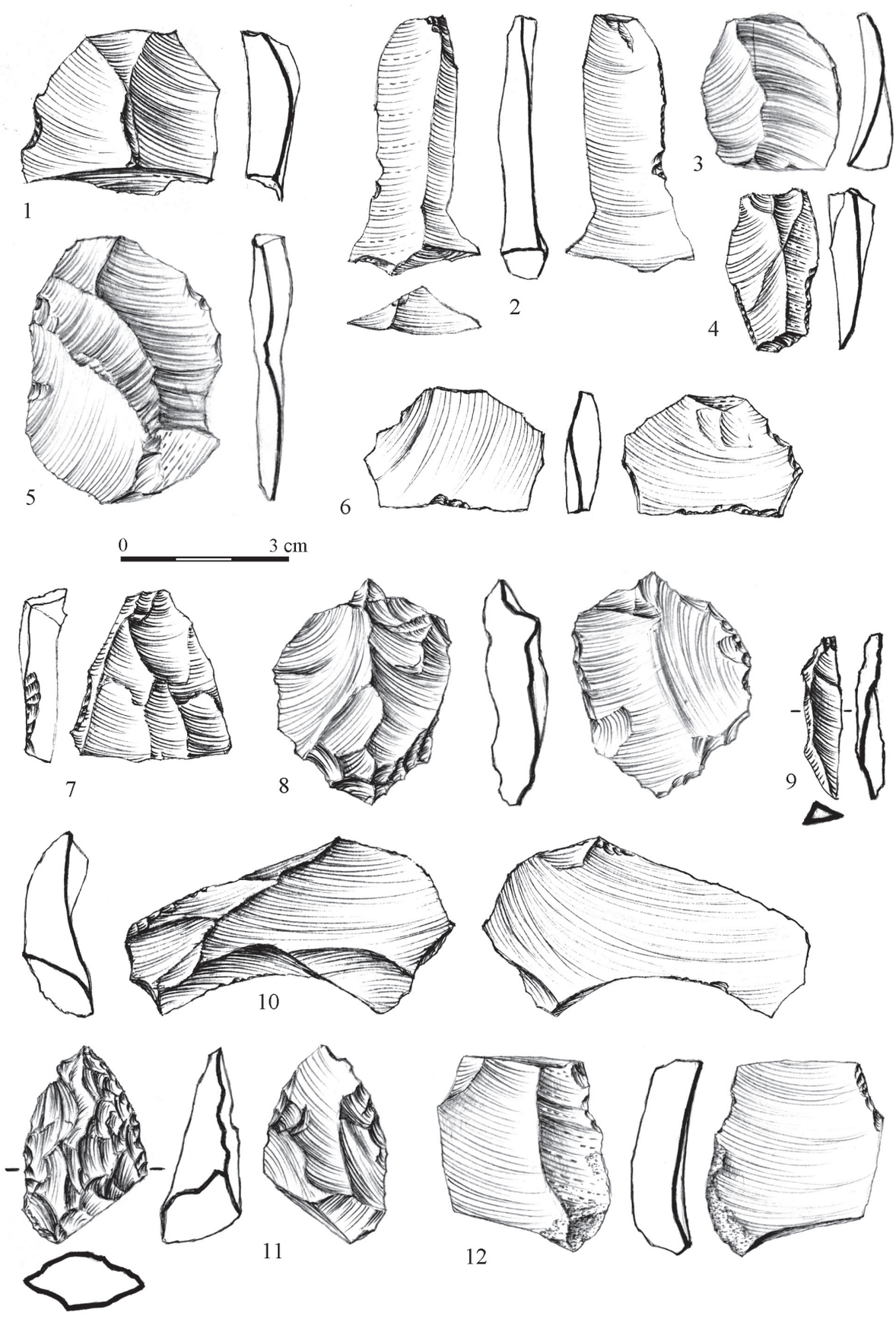


**Fig. 8.** Wilczyce, Sandomierz district, site 10, feature 4. Flint material from the backfill of the feature.
Drawing by E. Gumińska

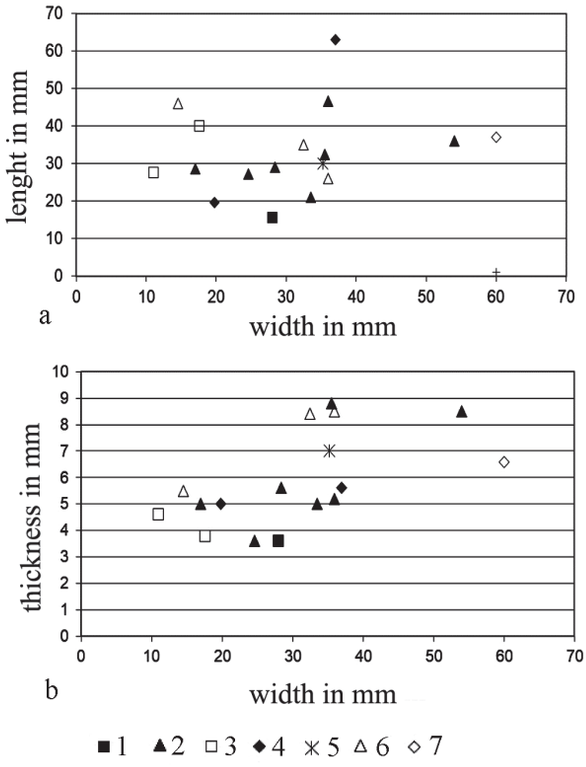


**Fig. 9.** Wilczyce, Sandomierz district, site 10, feature 4. Metric diagrams of tools. 1 – notched tools; 2 – retouched flakes; 3 – truncated blades; 4 – Endscrapers; 5 – borers; 6 – retouched blades; 7 – sidescraper. Processing by T. Boroń.

unequivocal evidence of its intentional use was recorded. Of the two truncated blades subjected to the analysis, one (Fig. 10: 3) was used for scraping some sort of a soft material. Transformations are visible both on the retouched edge and on the opposite, lateral edge, on which observations revealed very fine damage and burnishing, whereas in the case of the second truncated blade and the notched blade no use-wear was recorded. In the group of the three analysed retouched blades only one (Fig. 10: 4; 11: 4) had microwear on the side edge. The rounding and burnishing of the edges indicate its use for scraping hides. Three of the analysed retouched flakes had use-ware transformations. Damage recorded on the edge of the first specimen was caused by using it for cutting hide (Fig. 10: 5), another one (Fig. 10: 6; 11: 5) was used for working in wood, while the third one was used for scraping some sort of an unidentified material (Fig. 10: 7). The sidescraper was most probably used for scraping bone and meat (Fig. 10: 8), although in several places there are also traces indicating contact with hide, which may suggest work associated with meat jointing. In the case of the splintered pieces, no unequivocal evidence of their intentional use was identified.

The traseological analysis of finds revealed use-wear transformations on edges and surfaces of eight tools. They were specimens used for scraping and cutting hide, working with bone/antler, wood, scraping bone and meat and scraping other unknown soft material.

### Stone material

In the fill of the grave pit, archaeologists recorded eight small scattered rock fragments. Some of them were forms that constituted parts of tools used for grinding or polishing, including a piece of an artefact that was perhaps originally a polishing stone (Fig. 15: 1) with a well-preserved, flat bottom surface and the roughly formed sides that were at a straight angle with the base and probably also with the originally present but now lost working surface. The discussed specimen was made of silica quartzite sandstone.

Also worth noting is the small fragment with three intentionally smoothed flat surfaces – the top one and two side surfaces. Originally it may have been a part of a polishing stone or another larger tool for grinding that after being damaged was adapted as a grinding stone (Fig. 15: 2). That tool was also made from a silica quartzite sandstone.

In the fill assemblage, there was one more tool for grinding or polishing made from an organogenic detrital limestone (Fig. 15: 3). It is a small fragment with only roughly defined features of its original morphology, with one smoothed flat surface. It is not characteristic enough to determine its specific function. However, the soft material from which it was made is interesting – it seems that this disqualifies that artefact as a potential quern.

The remaining specimens are probably natural rock fragments without traces of any treatment, which, however, may be non-specific pieces of larger tools.

### Pottery

From the fill of feature 4 archaeologists retrieved 256 pieces of pottery vessels. The analysed material is characterised by strong fragmentation. The largest shard was 60×40 mm, while most fragments were under 20 mm. For this reason, it was not possible to determine the morphological types of the vessels from which they possibly came from. It was also impossible to identify shards that would allow the reconstruction of larger fragments of pottery containers. Thirteen fragments were classified as rim elements, five as bottom parts, and the remaining ones (238) were parts of bodies. The majority of the pottery material came from

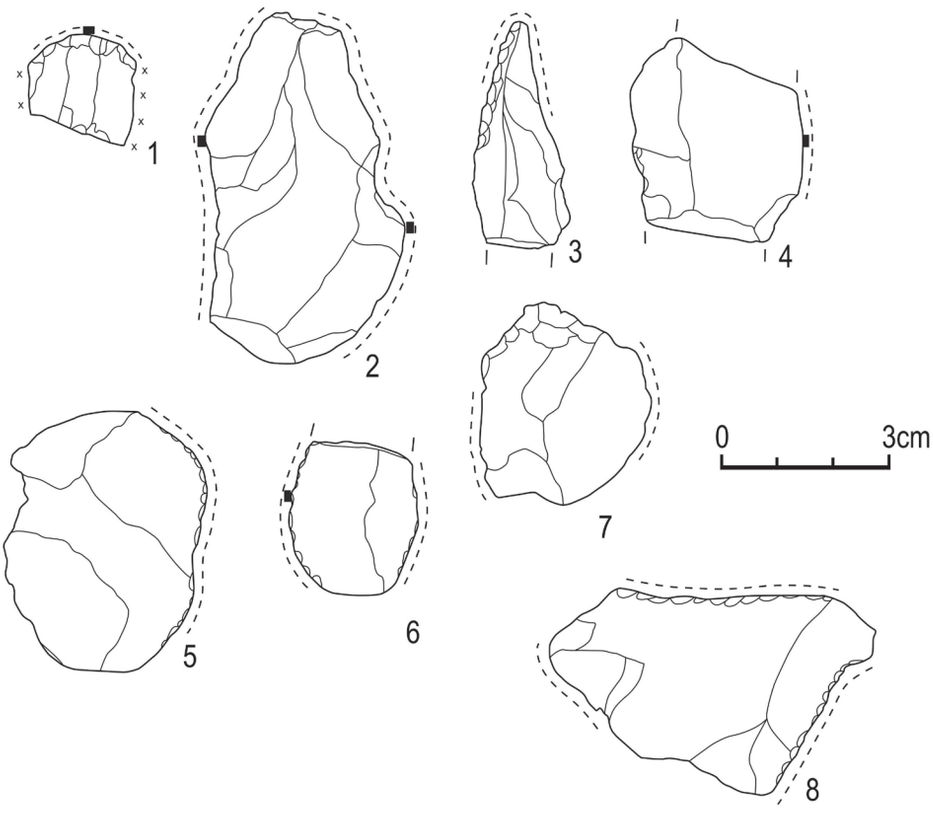


**Fig. 10.** Wilczyce, Sandomierz district, site 10, feature 4. Artefacts with evidence of use-wear: 1–2 endscrapers; 3 – truncated blade; 4 – retouched blade; 5–7 – retouched flakes; 8 – sidescraper. Drawing by M. Winiarska-Kabacińska.

vessels with fine or medium-thick walls, i.e. between 4 and 7 mm. The greatest recorded thickness of a pottery fragment was 10 mm. The presence of an intentional temper in the ceramic mass was observed in over half of the analysed shards (145 specimens). In each case it was a mineral temper, mostly fine-grain (grains with the diameter not exceeding 1 mm) or sometimes fine- and medium-grain. The lack of temper detected through macroscopic observations was recorded in the case of 109 fragments. Twelve of the discussed fragments (5 rims and 7 body parts) have traces of ornaments in the form of multiple horizontal impressions of a double-stranded twisted cord (Fig. 12: 1, 2). Four fragments of vessel body parts are decorated with impressions of rows of short vertical stamps (Fig. 12: 3), whereas the surface of one piece is fully covered with smudges made with a wisp of straw. In addition to the remains of pottery vessels, the fill of the pit included 41 small (33×29 mm or less) lumps of daub.

The allocation of the analysed pottery fragments to specific cultural provenance was very difficult because of their poor state of preservation and the deposition context. However, an attempt to do so was made, and it was established that the discussed material is definitely non-homogeneous. Some fragments were made from clay with the addition of pink and white quartz rubble and fine-grain sand, which is the most typical temper in the case of the Globular Amphora culture vessels (Szmyt 2010, 184; Czebreszuk *et al*. 2006). Also, the smooth and dark surface of some of the fragments have analogies with the pottery of the above-mentioned culture known from Wilczyce. A larger part of the fragments in the assemblage is characterised by light, matt surfaces and a small addition of temper in the form of fine-grained sand, which is characteristic of pottery vessels of the Corded Ware culture observed on the discussed site (Włodarczak *et al*. 2016, 36). This also applies to fragments decorated with impressions of the double-stranded, left twisted cord placed horizontally (Fig. 12: 1, 2) – a motif that is characteristic of the Corded Ware culture on the Sandomierz Upland (Włodarczak 2006, 16, 84). The archaeologists did not record any pottery fragments that would be characteristic of other Neolithic cultures, while several pieces were attributed to the early Bronze Age Mierzanowice culture. By way of summary, we can state that the discussed pottery assemblage has a Late Neolithic chronology or may

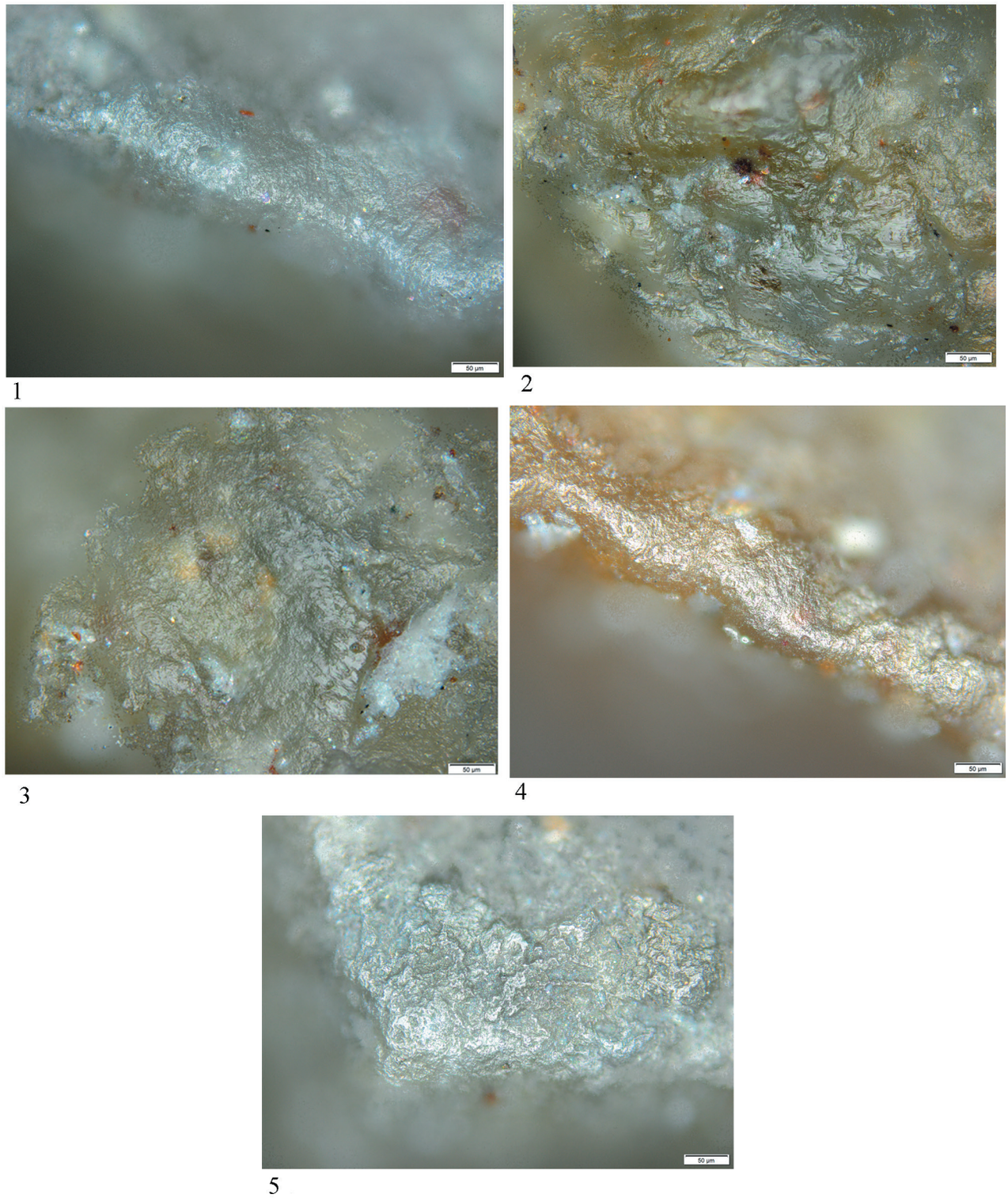


**Fig. 11.** Wilczyce, Sandomierz district, site 10, feature 4. Microscopic photographs: 1 – endscraper, scraping hide; 2–3 – endscraper, processing bone/antler; 4 – retouched blade, scraping hide; 5 – retouched flake, processing wood.
Photo by Drawing by M. Winiarska-Kabacińska.

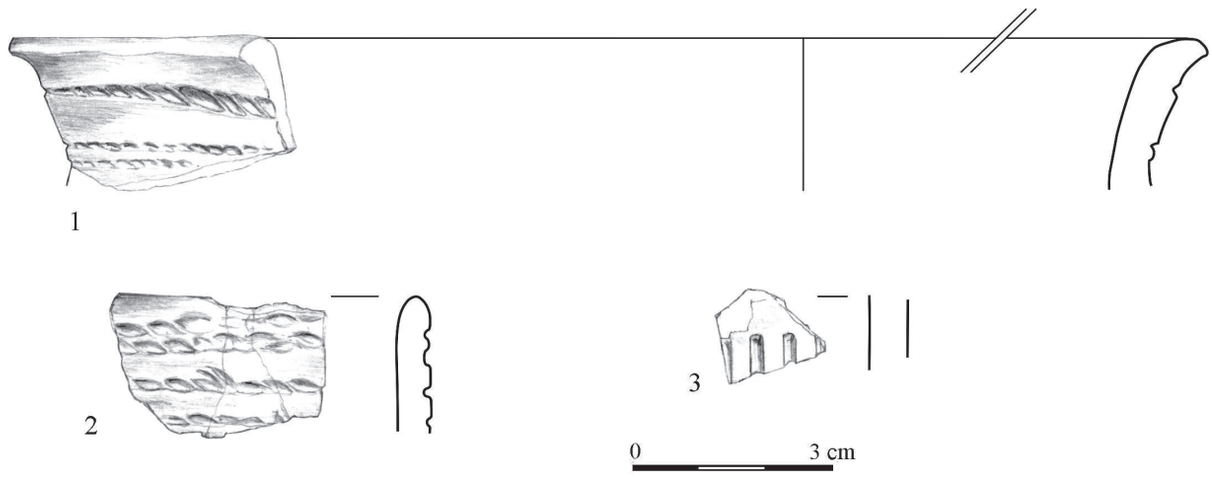


**Fig. 12.** Wilczyce, Sandomierz district, site 10, feature 4. Pottery material from the fill of the feature.
1–2 – rim fragments of the Corded Ware culture vessels decorated with cord impressions; 3 – a piece of a Globular Amphora culture vessel – body fragment decorated with a row of impressed vertical lines. Drawing by U. Nieckuła-Skwara.

be with a component dated to the turn of the Neolithic and the Bronze Age, which corresponds with the material discovered to date on the Wilczyce site. The depth of the deposition of individual fragments is not helpful for their cultural identification and dating. The material is mixed and thus it is only possible to state that the majority of vessel fragments (5 pieces), which most probably belonged to the Mierzanowice culture inventories, were possibly located in the upper parts of the fill of the feature. However, with such a small sample resulting from the poor state of the archaeological material, this data does not seem to be significant.

### Bone artefacts and ornaments

During the exploration of the fill of feature 4, archaeologists discovered 2 artefacts: a bead and a perforator.

The bead is made from a long bone of an unspecified animal species. It has an irregular outline, and its surface is not smoothed. The hole bored in it has conical walls – with the larger diameter of 5 mm and the smaller one of 2.5 mm – and is visibly moved to the side of the artefact (Fig. 13: 1).

The perforator is made from a sheep/goat metatarsal bone. It is 26 mm long and 16.5 mm wide at the base, with a smoothed and rounded end (Fig. 13: 2).

### Animal bones

The zooarchaeological analysis covered osteological material from the fill of feature number 4 consisting of fragments of bones and animal teeth, 282 animal remains in total, of which the majority – 271 – were animal bones.

The state of preservation of animal remains submitted for the analysis was relatively good, as indi-

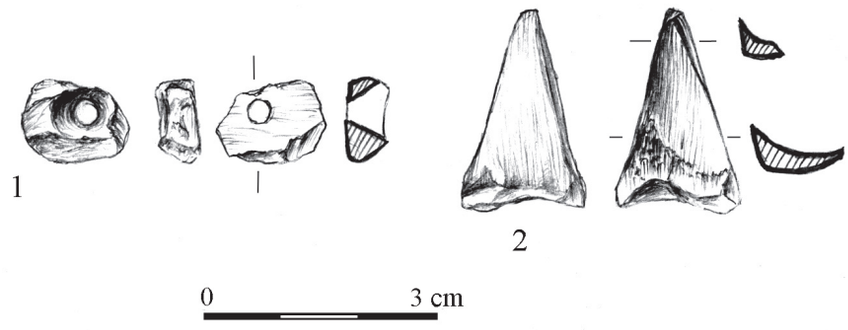


**Fig. 13.** Wilczyce, Sandomierz district, site 10, feature 4. Bone artefacts and ornaments from the backfill of the feature.
Drawing by E. Gumińska.

cated by the percentage of fragments that were identifiable in the terms of their species and anatomical origin (Table 2). The remains were broken into small fragments and some pieces were only parts of cortical bone without distinctive features. The greatest impact on the state of preservation of the osteological material in terms of taphonomy had the third, diagenetic stage. Bone remains were largely deprived of organic components, which resulted in their substantial fragility. They were deposited in the environment characterised by the relatively intensive penetration of groundwaters, which had a damaging effect on the general state of preservation of organic sources. The long period of the deposition of the osteological material in the soil also took its toll.

**Table 2.** Wilczyce, Sandomierz district, site 10, feature 4. Animal remains – general assessment.

| | N | % |
|---|---|---|
| remains identified | 240 | 85,1 |
| remains unidentified | 42 | 14,9 |
| **Total** | **282** | **100** |

The scientific value of the animal remains was additionally affected by biostratinomic factors. Undoubtedly, the large part of the remains was treated during consumption, including their strong fragmentation. This was indicated by the shape of some fragments, as well as the damage recorded through macroscopic observations – the result of using tools for meat jointing.

In the course of the standard zooarchaeological analysis, researchers identified species and anatomic parts of both bone fragments and teeth. The remains were also analysed in terms of age, sex, and the potential identification of the morphological type of animals.

Bone remains of sheep and goat, because of the morphological similarity of their skeletons, were analysed as one group – "sheep/goat", in accordance with the rules of identification described by zoologists (Schramm 1967; Halstead *et al.* 2002; Zeder and Lapham 2010; Zeder and Pilaar 2010) – which is commonly applied a practice in zooarchaeological analyses (Lasota-Moskalewska 2008).

The bone material was analysed in the context of its discovery, taking into consideration two identified locations: (1) the fill of the feature and (2) bones construed as elements of deposit associated with the with human skull.

The anatomical identification consisted of the cataloguing of individual parts of the skeleton from which the given animal remains came from. On that basis, it was possible to create anatomical distributions of the fragments of the identified species, and then divide the material into seven groups depending on their location in the skeleton: 1. the *head* – skull, horn cores, antlers, hyoid bone, mandible, teeth; 2. the *trunk* – vertebra, sacrum, sternum, rib; 3. *proximal forelimb* – scapula, humerus, radius, ulna; 4. *distal forelimb* – carpal bones, metacarpal bones; 5. *proximal hindlimb* – hip bones, femur, patella, tibia, fibula; 6. *distal hindlimb* – tarsal bones, metatarsal bones; and 7. *digital bones* – phalanges I, phalanges II, phalanges III (Fig. 14).

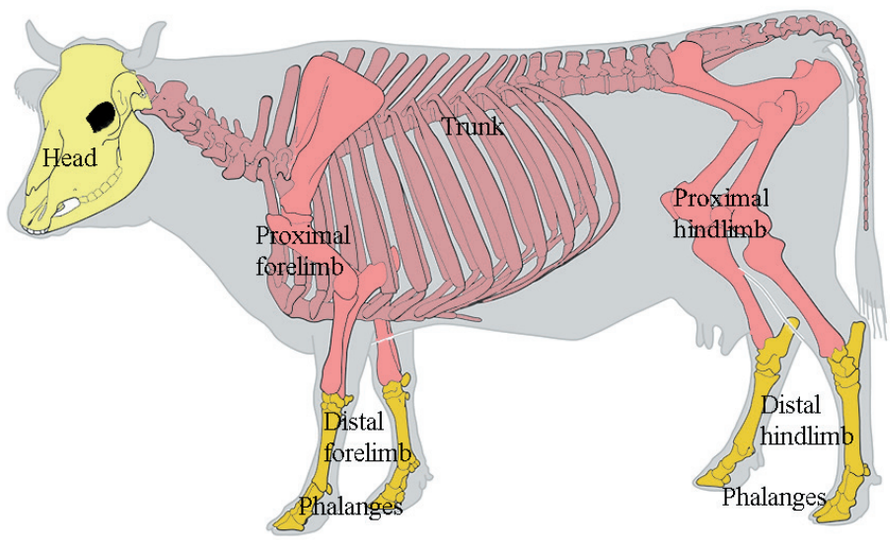


**Fig. 14.** Technological division of carcase chart (according to Krysiak *et al.*, 2007, with supplementary information by M. Osypińska; downloaded from: www.://ilsewielage.nl/en/scientific-illustration/).

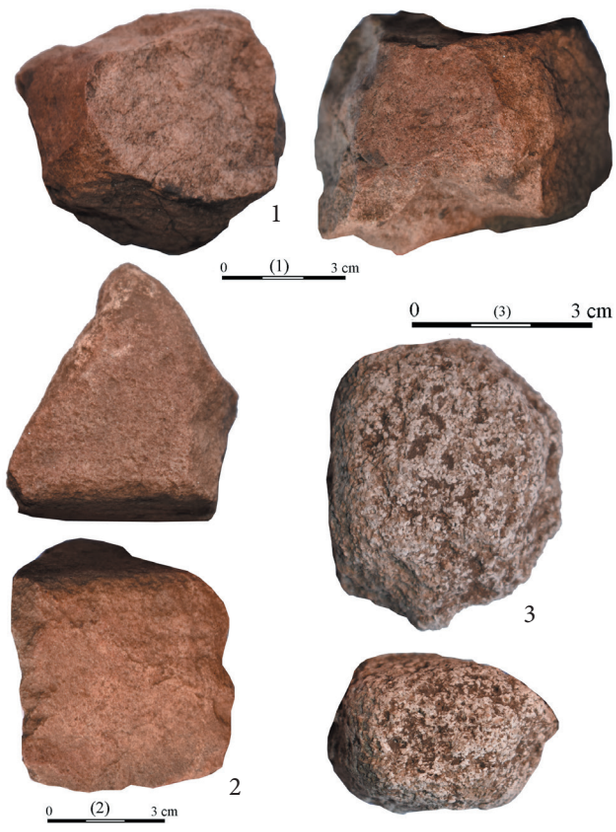


**Fig. 15.** Wilczyce, Sandomierz district, site 10, feature 4. Stone material from the backfill of the feature. Photo by K. Kerneder-Gubała.

The number of the anatomically identified remains is stated in accordance with the division into above-mentioned groups. The analysis covered anatomical distributions for cattle, pig, and sheep/goat, with special attention paid to the presence of phalanges and the balance between the number of bones of the forelimb and hindlimb. The lack of balance between those two categories of remains was defined as the difference of 10% or more.

When discussing the results of the analysis, the following terms were used: a part of the carcass which was attractive or unattractive in terms of consumption. Attractive are those animal body parts that have the most muscles and fat. Thus, according to the division adopted in this paper, these were: the trunk and proximal forelimb and hindlimb, while the head, distal forelimb and hindlimb, and phalanges have less value for the consumer (Lasota-Moskalewska 2008). The main criterion of the above-mentioned division is the energy value of the part of the carcass associated with individual anatomical elements.

Reference lists of bones in skeletons of relevant species obtained through experiments (Lasota-Moskalewska, 2008) were compared with the analysed finds in order to check to what extent the anatomical composition of the remains from the feature number 4 had been modified.

The evaluation of the animals' death age was done by observing the progress of the degree of the ontogenetic development of bones and teeth (Kolda 1936; Chaplin 1971; Lutnicki 1972; Müller 1973). Bones with preserved diagnostic morphological elements were subjected to the osteometric study based on standardised data (Driesch von den 1976). The state of teeth development was analysed based on data collected by Müller (1973). The age at death was also evaluated by looking at the degree of long bone fusion (Kolda 1936; Chaplin 1971). Based on those methods, it was possible to identify the bones and teeth of adolescent and very young animals. The first category includes animals that are already grown but still morphologically immature.

The analysis of the morphology was conducted based on the measurements performed in accordance with the rules unified by Driesch (1976) and using the relevant coefficients (according to Całkin, Schramm, Teichert, Kiselwalter, Matolcsi, Koudelka quoting von den Driesch and Boessnackiem 1974). The morphological type of cattle was reconstructed using the point scales constructed by Lasota-Moskalewska, Kobryń and Świeżyński (1987). That method enables the conversion of absolute metric values into relative values expressed in the scale from 0 to 100 points. In the case of cattle, the point scale was divided into three groups representing small (0–3 points), average (31–69 points), and large (70–100) size.

Animal remains discovered in the fill of feature number 4 only belonged to mammals (*Mammalia*). Most of them (53.44%) are fragments of skeletons of small wild-living rodents naturally present in the discussed habitat (Table 3), whereas the remaining part of the osteological material constituted bones of breeding animals – sheep, goat, pig, and cattle (Table 3). Generally speaking, the largest group consists of skeletal fragments of small ruminants – sheep and goat (33.19%), where only sheep bones (*Ovis orientalis* f. *domestica*) were precisely identified. The second largest group constituted remains of domestic pig (*Sus scrofa* f. *domestica*) and the *Suidae* family. The third species identified in feature number 4 was cattle (*Bos primigenius* f. *domestica*), the remains of which constituted only a small percentage of the osteological material (2.15%). The analysis of the anatomical distribution, due to the relatively small frequencies of remains in species groups, was carried out only with re-

**Table 3.** Wilczyce, Sandomierz district, site 10, feature 4. Species distribution of animal remains in feature fill.

| Taxon | N | % |
|---|---|---|
| sheep / goat *Ovis orientalis* f. *domestica*/ *Capra aegagrus* f. *domestica* | 74 | 33,19 |
| sheep | 3 | |
| pig *Sus scrofa* f. *domestica* | 20 | 11,20 |
| suidae Suidae | 6 | |
| cattle *Bos primigenius* f. *domestica* | 5 | 2,15 |
| rodent *Rodentia* | 124 | 53,44 |
| **identified (NISP)** | **232** | **100/ 85,60** |
| mammals *mammalia* | 11 | 14,40 |
| unidentified | 28 | |
| **Total** | **271** | **100** |

**Table 4.** Wilczyce, Sandomierz district, site 10, feature 4. Anatomical distribution of sheep / goat, pig and cattle remains in the feature fill.

| Bone | Sheep/goat | | pig | cattle | |
|---|---|---|---|---|---|
| | fill | deposit | fill | fill | deposit |
| *cranium* | 7 | | | | |
| *maxilla* | | | | | 2 |
| *dentes* | 5 | | 10 | | |
| *vertebrae* | 25 | | | | |
| *costae* | 5 | | | | |
| *scapula* | | | | | 1 |
| *humerus* | | | 3 | 1 | |
| *radius* | 3 | | 1 | | 2 |
| *ulna* | 1 | | | | |
| *o. metacarpalia* | 3 | | | 1 | |
| *o. carpi* | | | | | 1 |
| *femur* | 7 | | 2 | | |
| *tibia* | 3 | 1 | 4 | | |
| *talus* | | 1 | | | |
| *o. tarsi* | 3 | | | | |
| *o. metatarsi* | | | | 1 | |
| Long bone | 15 | | | 2 | |

gard to putting together numeric and frequency data (Table 4). In terms of anatomy, the skeleton of small ruminants was the most completely represented (Table 4). In the fill, archaeologists recorded fragments of skull, teeth, fragments of the vertebra, radius, metacarpal bones, ulna, femur, tibia, and tarsal bones. In terms of division according to meat jointing, remains of the small ruminants were dominated by elements of the trunk (Table 5). A relatively high frequency was also observed in relation to fragments of the head and the proximal hindlimb (Table 5). There were several fragments from the proximal forelimb, distal forelimb, and distal hindlimb. The fragments of pig bones discovered in the fill of the grave generally came from three parts of the carcass: the head, proximal forelimb, and proximal hindlimb, i.e. elements believed to be the most attractive for consumption purposes. Cattle remains discovered in the fill of feature number 4 came from three parts of the carcass according to the meat jointing division: the proximal forelimb, distal forelimb, and the distal hindlimb (Table 5). Remains of immature animals were recorded only in the group of pig bones. These were several elements of the skeleton from an individual which was slaughtered or died at a very young age (around 1-month-old), and a bone of an animal that was killed as a juvenile.

Due to the lack of distinctive features on the preserved animal remains it was not possible to identify their sex. Also, obtaining data concerning the morphology of breeding animals was very limited because of the significant fragmentation of finds, particularly in the case of the remains discovered in the fill of feature number 4. There were no ruminant horn cores recorded in the assemblage.

None of the analysed bones had evidence of pathological changes, whereas in the fill of feature number 4 archaeologists discovered bone fragments bearing marks associated with use-wear or craft and butchery (Table 6). Damage associated with consumption included burn marks on bones, charring, and cuts

**Table 5.** Wilczyce, Sandomierz district, site 10, feature 4. Anatomical distribution of animal remains according to technological segregation.

| Carcass part | Cattle | | sheep / goat | | pig |
|---|---|---|---|---|---|
| | fill | deposit | fill | deposit | deposit |
| head | 0 | 2 | 13 | 0 | 10 |
| trung | 0 | | 30 | 0 | 0 |
| Proximal part of the forelimb | 1 | 3 | 4 | 0 | 4 |
| Distal part of the forelimb | 1 | 1 | 3 | 0 | 0 |
| Proximal part of the hindlimb | 0 | 0 | 10 | 1 | 6 |
| Distal part of the hindlimb | 1 | 0 | 3 | 1 | 0 |
| phalanges | 0 | 0 | 0 | 0 | 0 |

that were made when dividing carcasses into smaller meat joints (Table 6).

**Table 6.** Wilczyce, Sandomierz district, site 10, feature 4. Taphonomy.

| Inventory | Species | Bone | damages |
|---|---|---|---|
| 19285 | sheep | femur | traces o burning |
| 19350 | unidentified | long bone fr. | charred |
| 19472 | cattle | scapula | Marks of damages by blade |
| 19658 | sheep/goat | vertebra fr. | Traces of cutmarks |

## Plant macroremains

The site in Wilczyce is located on loesses that form the northern European loess belt (Solarska *et al.* 2013). Some xerophile steppic plant communities survived there, including the most well-known concentrations of such plants on the hills near the town of Sandomierz – Góry Pieprzowe (Głazek 1980). Based on the maps of the potential natural vegetation (Matuszkiewicz 2008) in the contemporary climate, the site should be covered mostly by subcontinental lime-hornbeam forests of the *Tilio cordatae-Carpinetum betuli* class and on relatively large areas by thermophilous oak woods *Potentillo albae-Quercetum* (Matuszkiewicz 2007). Currently, those fertile lands are largely under cultivation.

In total, 126 samples of wood were taken for analysis. The size of individual charcoals was similar, with the smallest dimension of around 5 mm.

The taxonomic identification was performed based on the difference in the anatomic structure of wood, using F. Schweingruber's key (1976) and the author's own anthracological reference collection.

Several identifications of samples were left at the genus level, since the identification of some tree species on the basis of their anatomical structure alone is impossible or very unreliable (Lityńska-Zając and Wasylikowa 2005).

In the discussed feature, archaeologists discovered the remains of two taxons of woody plants. In terms of numbers, the dominant taxon was oak *Quercus* sp. – 121 burnt fragments of wood belonging to that genus were identified. The second taxon discovered in the sample was Baltic pine *Pinus sylvestris*, represented by only 5 charcoal specimens. The wood of both representatives of trees came from trunks or thick branches.

In the case of human activity, such a small variety of species is puzzling. It is possible that due to the method of taking samples (charcoals from selected concentrations were collected) we deal with remains that come from individual logs that fell apart into small fragments creating accumulations of charcoals.

However, we must remember that charcoal remains should be interpreted in the relevant context, i.e. in relation to the archaeologically analysed evidence of human activity. There are three key context groups of anthracological finds: wood sourced selectively because of its desirable properties, wood having ritual value, and wood collected accidentally (Chabal 1988, 195). Without doubts, we may also presume that firewood was selected already at the time of the functioning of the settlements. Oak wood has very high energy value and thus constitutes a desirable fuel.

Despite the too small number of identified charcoals that are required to create a paleoenvironmental reconstruction (Théry-Parisot *et al.* 2010), the analysed material may constitute remains of wood that reflect the actual species composition of forest communities that were present at the discussed site in the Preboreal period.

Isopollen maps (Ralska-Jasiewiczowa *et al.* 2004) indicate a relatively large percentage of oak pollen in the discussed area at the time of the Globular Amphora culture occupation of the site (Milecka *et al.* 2004). The same applies to pine (Latałowa *et al.* 2004). Results of palynological analyses from Czajkowo (Szczepanek 1971), Krasne (Kołaczek 2007), and Poręby Wojsławskie (Chodorowski *et al.* 2013) located relatively close to Wilczyce also present a high spectrum of both taxons in parts of the profiles identified with the Preboreal period.

Thus, it is possible that around 4,000 years BC the environs of Wilczyce were covered by thermophilous oak woods, close to the contemporary *Potentillo albae-Quercetum* forest communities dominated by oak with the steady participation of pine.

As the result of the activity of the early farmers tribes (primarily animal husbandry), oak woods that survived from the Atlantic period were transformed into light forests dominated by one taxon. An analogous situation probably also took place in the case of the Miechów Upland (Moskal-del Hoyo *et al.* 2017).

## Human remains

### Anthropological analysis

The anthropological analysis was carried out in accordance with the commonly adopted standards for determining sex and assessing age at death (White and Folkens 2005).

The skull (19476) had a delicate structure, the right part of the skullcap had suffered secondary damage. It has unfused sutures and non-ossified spheno-occipital synchondrosis. On the squamous part of the frontal bone, the frontal suture – *sutura metopica* – was preserved, frontal tubers defined, sharp supra-orbital margin, squamous part of the occipital bone rather delicately defined, left mastoid part of the temporal bone is small, the right one is damaged (Fig. 16).

Based on the values of the cranial indices (Table 7), it can be classified as mesocephalic (the value of the main index 76) with a broad forehead (the forehead breadth index of 71.6). The face part almost complete, damaged right zygomatic arch. Orbits symmetrical, high (the orbital index: 88.2), moderate nose (the nasal index: 48.9), with a slight convex profile. *Tuberculum marginale* of the zygomatic bone present on the right side. *Foramen magnum* narrow (the foramen magnum index: 77.1). All cranial bones with a visible perforation of the bone tissue of various intensity, particularly strongly observable on maxillas, indicating the presence of scurvy (Brickley and Ives 2006)

Recorded on the right side of the cranial base was the enlargement of the jugular foramen with smoothed edges (Fig. 17).


**Fig. 16.** Wilczyce, Sandomierz district, site 10, feature 4, skull 1947: a – *norma frontalis,* b – *norma lateralis*. Photo by A. Szczepanek.

**Fig. 17.** Wilczyce, Sandomierz district, site 10, feature 4, skull 1947 – *norma basilaris*. Photo by A. Szczepanek.

The asymmetrically enlarged jugular foramen with smooth edges may be a variation of the anatomical structure of that part of the skull or may result from a disease process caused by the thrombophlebitis of the internal jugular vein, arteriovenous malformations (angiomas), nerve sheath tumour or a meningioma (Caldemeyer *et. al.* 1997). The larger foramen on the right side is recorded more often (Skrzat *et. al.* 2016). The above-mentioned disease entities have similar symptoms that primarily manifest themselves in long-term headaches and tinnitus (Yang *et al.* 1997). Modern health diagnostics that allows establishing the aetiology of the disease process is based on various imagining techniques (CT scan, NMR spectroscopy) combined with the histopathologic analysis and recording clinical symptoms. Those medical exams allow health practitioners to make a correct diagnosis and then start a relevant treatment. In the case of bone material such a complex approach is not possible, but even assuming that the enlargement of the jugular foramen was pathological, it was not the direct cause of death.

The maxillas has all of its permanent teeth, only slightly worn. The M3 molars are in the eruption stage while the maxillary lateral incisors show partial rotation (Fig. 16).

| M3 | | | | | | | | | | | | | | M3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M2 | M1 | P2 | P1 | C | I2 | I1 | I1 | I2 | C | P1 | P2 | M1 | M2 |
| | | | | | | | | | | | | | | |

Based on the state of the progress of the morphological development of the skull, the age at death was established as *Iuvenis*, and the delicate structure of the bones suggests that the skull belonged to a female.

## Finds discovered at the level of the skull

### Animal bones

Finds from feature number 4 discovered at the same level as the human skull included a small assemblage of bone fragments belonging to two species of breeding animals: cattle (*Bos primigenius* f. *domestica*) and sheep (*Ovis orientalis* f. *domestica*). In the case of cattle, the entire mandible and fragments of the right forelimb – the scapula (Fig. 18) – were deposited next to the skull. Sheep remains came from the hindlimb. These were the tibia and the astragalus from the right limb (Fig. 19).

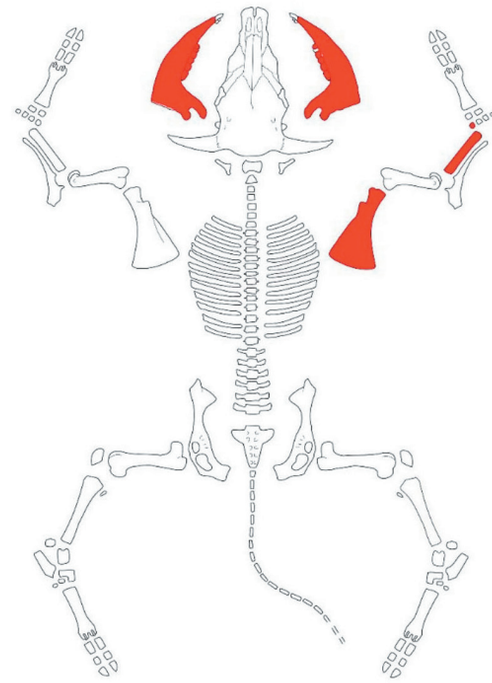

**Fig. 18.** Wilczyce, Sandomierz district, site 10, feature 4. Elements of cattle skeleton deposited in the vicinity of the human skull (according to M. Coutureau, after D. Helmer, 1987: n. 1, fig. 5, with supplementary information by M. Osypińska).

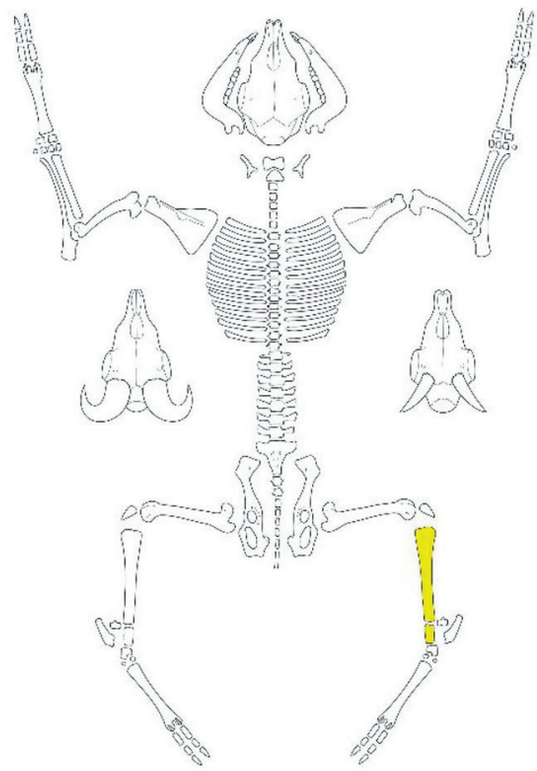

**Fig. 19.** Wilczyce, Sandomierz district, site 10, feature 4. Elements of sheep skeleton deposited in the vicinity of the human skull (according to M. Coutureau, after D. Helmer, 1987: n. 1, fig. 6, with supplementary information by M. Osypińska).

The only cattle bones with preserved features allowing for making measurements were discovered in the deposit (Table 8). Both values obtained through measurements were transposed to point scales (Lasota-Moskalewska 2008), providing the basis for the evaluation of the size of the individual(s) from which they came from – they corresponded with the properties of a medium-large and large cattle (Table 7).

**Table 7.** Wilczyce, Sandomierz district, site 10, feature 4. Measurements and skull indexes.

| Measurement | | **Index** | |
|---|---|---|---|
| g-op | 175 | eu-eu/g-op | 76,57 |
| eu-eu | 134 | ba-b/g-op | 76,57 |
| ft-ft | 96 | ba-b/eu-eu | 100,00 |
| ba-b | 134 | ft-ft/eu-eu | 71,64 |
| mf-ek | 34 | n-pr/zy-zy | 53,85 |
| sbk-spa | 30 | szer.a.pir/n-ns | 48,98 |
| szer. a. pir. | 24 | sbk-spa/mf-ek | 88,24 |
| n-ns | 49 | szer.f.m./ba-o | 77,14 |
| n-pr | 63 | | |
| zy-zy | 117 | | |
| ba-o | 35 | | |
| szer.f.m. | 27 | | |

**Table 8.** Wilczyce, Sandomierz district, site 10, feature 4. Osteometry – cattle remains which are the part of the deposit.

| Bone | Measurements (mm) | Points |
|---|---|---|
| scapula | SLC-59,01 | 79 |
| radius | Bp-89,11 | 49 |

Also, the two sheep bones subjected to the osteometric study came from the deposit. The obtained data made it possible to calculate the approximate withers height of the individual (Table 9). It was a relatively large animal, with a withers height of approximately 74.8 cm.

Data collected through the above-mentioned zooarchaeological analyses provides the basis to propose a preliminary hypothesis that the animal bones discovered as elements of deposit associated with feature number 4 may have been "consumption offerings", i.e. providing the deceased with meat, whereas they were not meant to ensure the company of animals as such. We can also tentatively assume that beef in particular may have been a prestigious deposit. It is difficult to assess the importance of furnishing the burial with the entire cattle mandible. Because of the low consumption value of that part of the beef carcass, the symbolic meaning of the presence of the cattle mandible in the "equipment of the deceased" seems probable. However, it is possible to hypothesize that other remains were intended for consumption. In the case of cattle, this was the "shoulder", while in the case of sheep – the "leg".

**Table 9.** Wilczyce, Sandomierz district, site 10, feature 4. Osteometry – sheep remains which are the part of the deposit.

| **Bone** | **Measurements (mm)** | **withers height (cm)** |
|---|---|---|
| tibia | Bd-29; SD-17 | |
| talus | GLI-33; GLm-30,3; Bd-20,02 | 74,8 |

## Stone material

Four stone artefacts were discovered in feature number 4, at the level of the human skull. The first one is a piece of a chunky tool with a concave working surface and the surviving natural structure of the rock. The bottom of that artefact is unworked and convex. Its sides create a straight angle with the working surface. Evidence of use-wear in the form of scratches or crushed surface are not legible (Fig. 20: 1). Both the concave shape of the working surface and its angle vis- à -vis the back surface and the sides, as well as the bulk of the tool, suggest that it may have been used as a quern. However, it possible that it was subsequently reused as a polishing stone, as such artefacts often have similar forms (Balcer 2006).

The second specimen was located in a similar context – on the perimeter on the floor of the feature. It is probably a slab with an amorphic shape and one flat surface with visible traces of use in the form of hollows, scratches, and chips (Fig. 20: 2).

Those specimens were made from local sedimentary rock. The quern was produced from a silica quartz sandstone, which is a very durable, hard, good quality raw material appropriate for long-term rubbing and grinding. The slab is made from an organogenic detrital limestone, also of local provenance, from Tertiary sediments, which is loosely compacted and prone to weathering, thus it is not a good raw material for making querns.

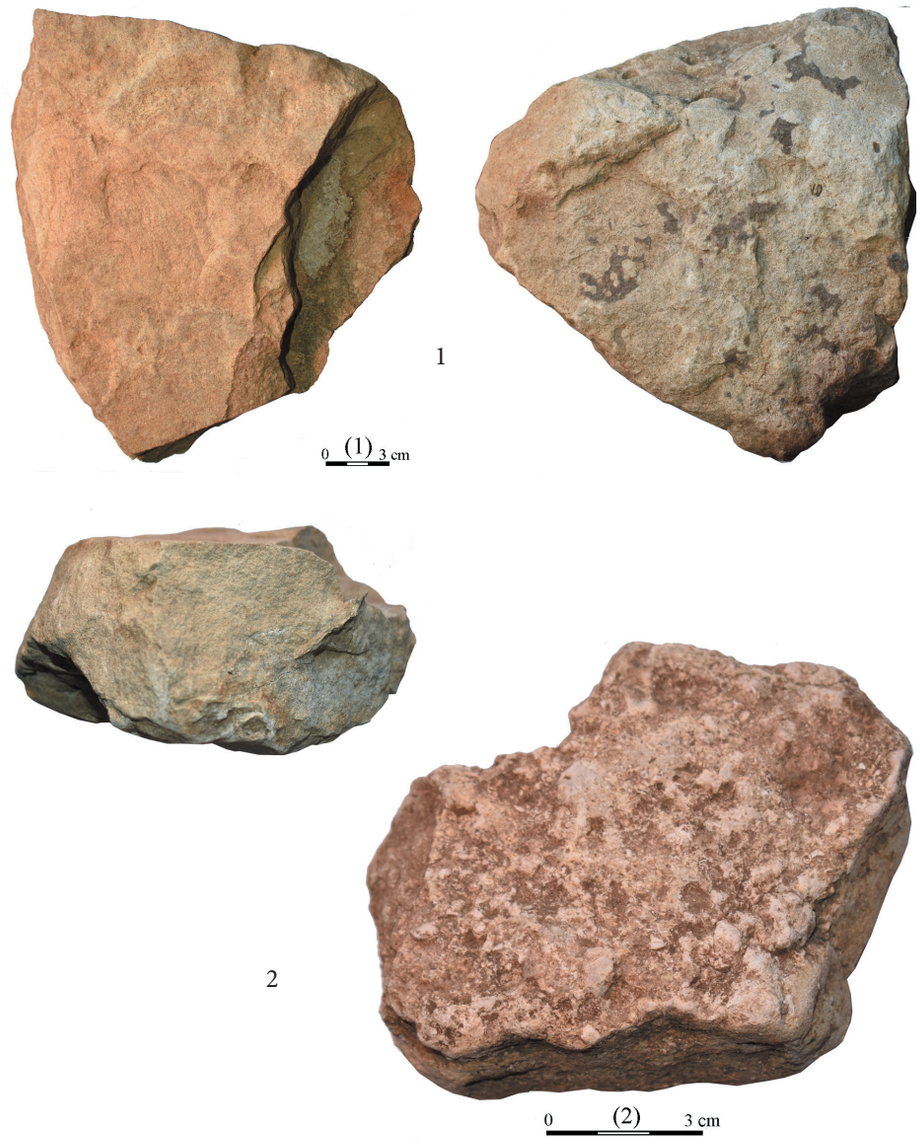


**Fig. 20.** Wilczyce, Sandomierz district, site 10, feature 4. Artefact at the level of the human skull: 1–2 stones. Photo by K. Kerneder-Gubała.

Because of the context of the discovery of both specimens, we may assume that their final function differed from the original one. They may have constituted some sort of stands or biers for other important objects such as animal or human bones, however, their function cannot be unequivocally established on the basis of the surviving data.

### Dating of the feature

Archaeological material discovered in Wilczyce did not contain any finds that would enable us to date the feature, therefore its chronology was based on the obtained radiocarbon dates. For the sample of the charcoal discovered in a layer located below the "deposit" of human and animal bones, the following dates was obtained: 3875 ± 35 BP (Poz-101792), which with the 68.2% probability refers to the years 2455–2297 BC (Fig. 21: 1). The second date – obtained from the cattle mandible – is 3790 ± 35 BP (Poz-90895) and with the 68.2% probability that it refers to the years 2286 – 2146 BC (Fig. 21: 2).

The earlier of the above-mentioned dates falls into the range of the Final Neolithic (Poz-101792), and the later date (Poz-90895) allows us to associate the feature with the settlement of the proto- and early phase of the Mierzanowice culture. It seems that

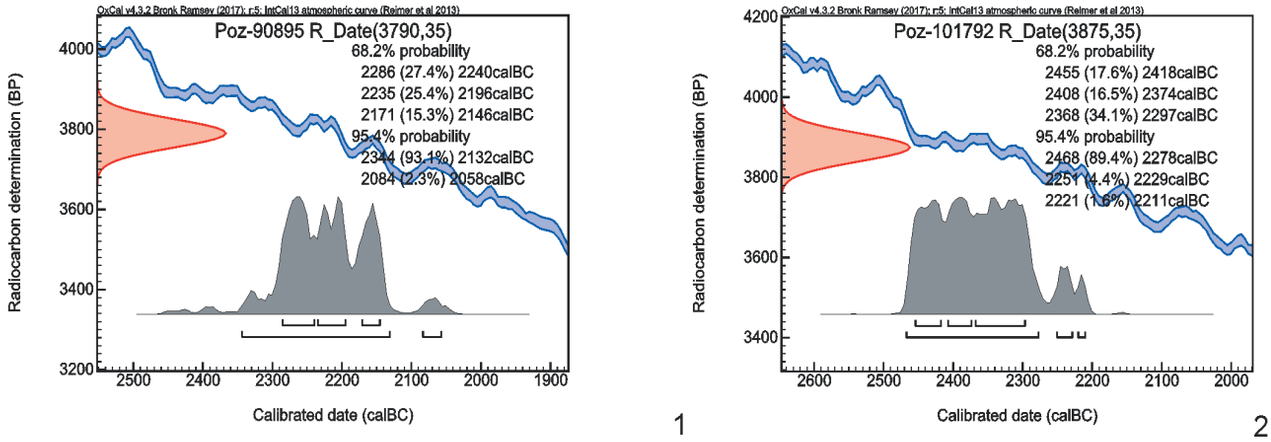


**Fig. 21.** Wilczyce, Sandomierz district, site 10, feature 4. Calibration chart for dates obtained for the analysed feature.

the binding date is the marking obtained for animal bone, as the charcoal could have been deposited in the fill of the feature during the process of its natural filling. Comparable early dates for human and animal bones in the settlement pits of the Mierzanowice culture were obtained for several features in the upper Vistula and San rivers basin, e.g. Mirocin, site 24, feature 16 – 3815 ± 35BP (Pos-54042); Szarbia, site 9, feature 1 / V – 3810 ± 35BP, Opatkowice, site 2, feature 4 – 3780 ± 30BP (Poz-34735), Książnice, site 2, feature 1/03 – 3780 ± 30BP (Poz-34696), Karwin, site 43, feature 39 – 3770 ± 35BP (Poz-34733) (Górski *et al.* 2013; Jarosz *et al.* 2018; Jarosz, and Mazurek 2020). Correspondingly early data were obtained for charcoals from site 243 in Skołoszów, site 7 – 3795 ± 35 BP (Pos-31697). In this case, the dating does not correspond to the material discovered in the feature, which can be associated with the classical phase of the Mierzanowice culture (Pelisiak and Rybicka 2019, 71–73, Table 1, Fig. 2, 3).

The acquired date (Poz-90895) expands the small database of radiocarbon dates associated with features from the chronologically connected with proto- and the beginning of early phases of the Mierzanowice culture (see Górski *et al.* 2013; Jarosz *et al.* 2018) and together with the older date at the same is the example of difficulties that sometimes arise during the interpretation of research results (compare with radiocarbon dates from feature 33, in Skołoszów, site 7; Pelisiak and Rybicka 2019, 72, Table 1).

### The interpretation of the feature's function

The reconstruction of the functioning of the discussed feature must take into consideration the material discovered in the pit and its detailed analysis. The presence of permanent settlement in the early Bronze Age gave the basis to create the image of the "typical" remains of storage pits and features where evidence of ritual practices such as human and animal burials were discovered.

Based on the shape of the horizontal plan (round) and its vertical cross-section (trapezoid) and the size of discovered feature at Wilczyce, it is possible to classify it as a typical storage pit, as those known, for instance, from settlements in Iwanowice (Kadrow 1991) and Dobkowice (Jarosz *et al.* 2018). The human skull of the young female, animal bones and polishing stone were deposited around 25 cm above the bottom of the feature, near its wall, which at that time already did not have any economic functions. Following the deposition of the said remains, it gradually filled up naturally, as indicated by the layout of the strata recorded in the cross-section (Fig. 2). Deposition of human remains by walls of the feature were noticed at e.g. Dobkowicach site 39, feature 54, individual I (in this case with polishing stone), site 37, feature 13, individual I and II and feature 120 (Jarosz *et al.* 2018, 46, Fot. 19; 73, tabl. 5: 1, 86, tab. 13) and Mirocin, site 24, feature 16 (Jarosz and Mazurek 2020).

The reusing of storage pits as places for depositing burials or individual human bones is often observed in settlements of the early Mierzanowice culture. Usually, this refers to young individuals, often females (aged 14–18) or children (see Jarosz *et al.* 2018; Szczepanek 2018; 2020; Jarosz and Mazurek 2020), which means that the feature from Wilczyce conforms with the above-mentioned observations. The presence of human remains together with animal bones in storage pits is known from other settlements of the Mierzanowice culture and sometimes they are une-

quivocally construed as features of a special (ritual) character (Kołodziej 2010). In some features, archaeologists discovered human remains accompanied by dog bones – Iwanowice and Książnice, Busko district (Kadrow and Makowicz-Poliszot 2000; Górski *et al.* 2013, 100, fig. 5, 113). In pit number 54 on site 39 in Dobkowice, in addition to human remains there were found bones of dogs, cattle and sheep/goat (see Jarosz *et al.* 2018; Makowicz-Poliszot 2018). A further example is a burial of young female in feature 16 at site 24 in Mirocin, where a large cattle skull was discovered (Jarosz and Mazurek 2020, tabl. 4: 1). In the context of storage pits of the Mierzanowice culture containing human burials, our attention is drawn to the fact that the human skull discovered in the feature from Wilczyce had no mandible – and for this reason we must consider whether this was an intentional partial burial or perhaps the skull got to the fill by accident and comes from a feature of an older provenance, e.g., a damaged grave.

Due to the current state of the source base, the burial rite of the people of the early phases of the Mierzanowice culture is not yet very well-known. We know of individual graves and small concentrations of burials dated to that period from the Lesser Poland Upland, including, among others, Żerniki Górne, Busko district (Włodarczak 1998) and Modlnica (Włodarczak *et al.* 2011, 331–336), Typical funerary features are dominated by burials of adult individuals (see Kadrow and Machnik 1997, 44, 45; Jarosz and Szczepanek 2019), while in the case of settlements, archaeologists have recorded storage pits reused to deposit bodies of children and young adults. For this reason, the presence of the skull of the *Iuvenis* female in the feature from Wilczyce could be construed as the manifestation of burial practices of the Mierzanowice culture. Similar rituals in the form of interring the dead or parts of their bodies in settlement pits, especially heads, can be found in the Unietice culture. This indicates the emergence of a certain supra-regional and cross-cultural trend in the early Bronze Age (Gralak 2009; Knipper *et al.* 2016). Another matter are the elements that accompanied the human skull – animal bones and stone artefacts. The key problem is that of their presumed contemporaneity, since they are often interpreted as an assemblage of a ritual character. The attractiveness of that hypothesis and the right choice of analogies often preclude the adoption of an opposing view, i.e. an alternative sequence of events that led to the accidental deposition of the finds discovered in the discussed feature.

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