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The Archaeology of Medieval and Post-Medieval Kitchen and Cuisine: Food - Utensils - Space

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Evidence of Food Preparation, Consumption and Storage in a Late Medieval Manor in Czechowice, Upper Silesia

Abstract

While researching the late medieval manor house in Czechowice, a small number of discoveries were made that directly or indirectly represent traces of food preparation, consumption and storage by the inhabitants of the local settlement. Archaeobotanical and archaeozoological remains and movable material were analysed, and archaeological structures representing the remains of buildings were uncovered. They indicate that the inhabitants of the Czechowice Manor were engaged in cereal cultivation and animal husbandry, which provided the local table with vegetable and meat and dairy products. Unfortunately, it has not been possible to discover the specific place where the food was prepared, but it seems that it was outside the residential part of the manor, perhaps in the open air or within an above-ground building with a light structure. The discovered storage pits or individual objects indicate that the Czechowice manor both stored and preserved meat or other products in a natural manner. It is difficult to create a complete picture of the sphere of life that constituted the consumption, preparation and storage of food by the inhabitants of the manor, however, they are certainly an interesting and important example for comparative studies with other late medieval settlement sites of this type.

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KEYWORDS
- food consumption
- kitchen and tableware
- animal bones
- post-consumption waste
- late Middle Ages
- Upper Silesia

Introduction

Archaeological research carried out between 2017 and 2021 revealed the remains of a late medieval manor house on a mound in Czechowice, today's district of Gliwice in Upper Silesia. The circumstances of the discovery of this building have already been presented in the literature on the subject.[1] The site is located in the eastern part of Czechowice, within the plateau of a regular oval elevation towering over the valley of a small stream (Fig. 1). It is worth mentioning that in the adjoining area to the east, the remains of the wooden St George's Church, in use, according to archaeological findings, between the 14th and 18th centuries, and of a younger, never completed Baroque church from the 18th century, have also been discovered.[2] The sacral building, together with the neighbouring feudal seat, certainly formed the centre of the local medieval settlement in the past.

Only scarce written records mention the potential owners of the village of Czechowice and the local manor in the Middle Ages. It cannot be ruled out that this is where the brothers Mikołaj and Zbrosław from Czechowice came from, who are mentioned as witnesses in documents issued by Duke Bolesław I of Cieszyn in the Toszek Castle on

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[1] Zdaniewicz 2020a, 99-117; Zdaniewicz 2021, 389.

[2] Zdaniewicz 2020b, 167-182.

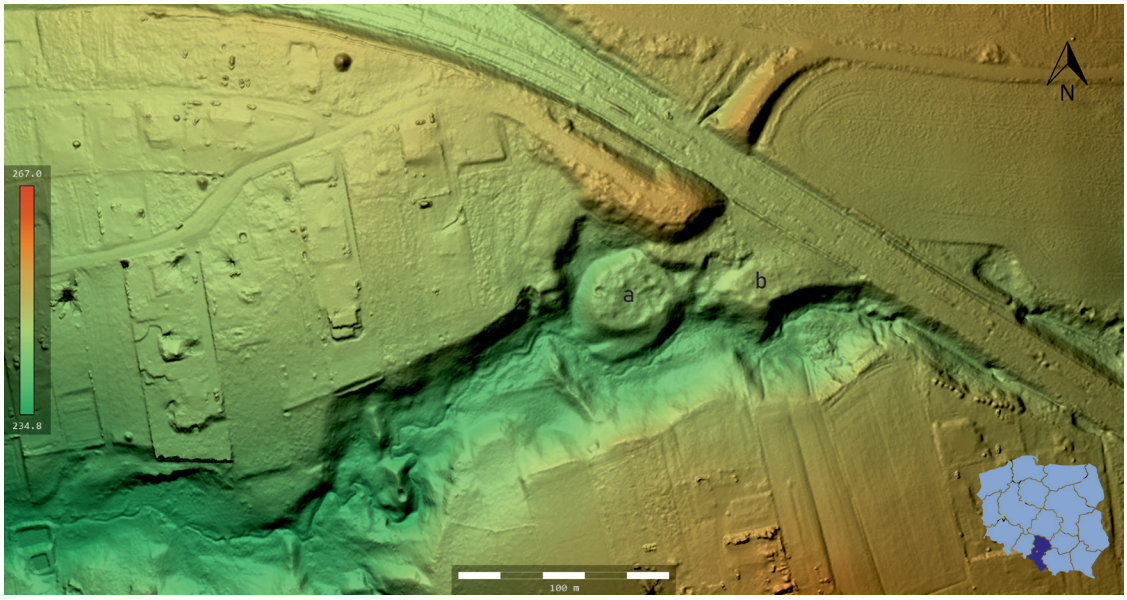

Fig. 1. LIDAR ALS visualisation of the area with locations of archaeological sites: a – Location of remains of the manor house on the mound; b – Location of remains of St George's Church. Graphic design: R. Zdaniewicz using Planlauf software.

1 April 1404 (as *Niclico i Zbroszke*) and 5 August 1407 (as *Mekil vnd Sbroschke von Czechowicz*).[3] Perhaps Steffan Latosek von Tiesskowicz, a scribe of Duke Nicholas I of Opole, who as the Duke's scribe drafted and witnessed a document issued in Opole on 5 June 1461, also came from the same village.[4] The more probable owner in the 2nd half of the 15th century was Mikulay z Czechowicze, known from a document issued at the castle in Toszek in 1463.[5] Subsequent references to the owners of the village relate already to modern times.

Almost the entire plateau area of the hill was verified in the course of analysis carried out by both excavation methods and a grid of geological boreholes. Remains of buildings with presumed residential and outbuilding functions were encountered. The results of archaeological prospecting thus provided material evidence of the existence of a manorial settlement, its development and its layout in the late medieval period. In addition to the observation of the cultural layers, a great deal of historical material relating to the functioning of the local manor house was recovered. From this, it is possible to infer, above all, the basis of the inhabitants' daily life or their social status. The discovered set of artefacts also provides an important basis for determining the time of use of the manor house.

Among the numerous movable artefacts recorded, some testified to one of the basic activities of life, namely food consumption. These were both objects used for preparing meals, their consumption, and probably also for storage or distribution. What was extremely important from the point of view of determining the diet of the manor's inhabitants was the discovered post-consumption waste in the form of animal bones. They make it possible to infer the species of livestock, which most certainly represented an important source of food. On the basis of the above finds, it is possible to attempt to reconstruct the activities related to the management of the kitchens of the Czechowice manor.

Manor layout and basis for its dating

What is important in the context of the analysis of artefacts and discovered bone material is their location within the excavated buildings and settlement levels. The archaeological work carried out revealed that the original manorial buildings were concentrated only in the southern part of the hill area (trenches 4, 5, 6-6A, 7, 8, 10) (Fig. 2). In the northern and central parts of the site, no cultural layers were found, only isolated artefacts, mainly in the form of fragments of vascular pottery in the humus layer (trenches 1-3, 10).

A building with residential functions, which was also the most important for the functioning of the settlement, was erected in the south-western part of the plateau, in its highest spot (Fig. 3). It was an aboveground structure, probably of the timber cottage type, rectangular in plan, with the front wall aligned SW-NE. Its original dimensions are difficult to reconstruct. The building was provided with a heating device in the form of a stove, as evidenced by the fragments of pot and slab tiles and earthen floor discovered in

[3] LT 1958, document no. 117; CDS 1859, 95-96; I. Panic believes that these knights came from the village of Czechowice near Bielsko, however, the place where the document was issued – the castle in Toszek, and the content of the documents referring to ownership changes in the village of Centnawa near Ujazd. It may indicate that the documents concern the knights from the area of the Duchy of Toszek, also subordinate to Bolesław, Duke of Cieszyn; Panic 2004, 235-236.

[4] CDS 1865, 83, document no. 254. A coin minted by Duke Nicholas I of Opole was discovered in the fill of one of the layers within the site.

[5] CDS 1865, 86, document no. 265.

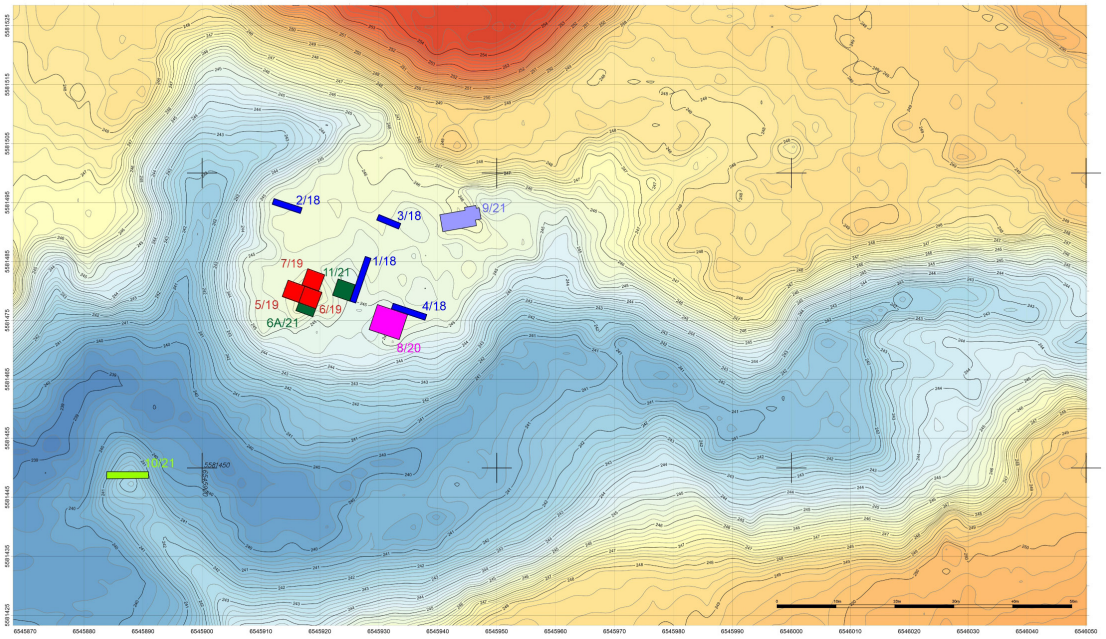

Fig. 2. Czechowice. Localisation of excavations in the plateau area. Graphic design: R. Zdaniewicz.

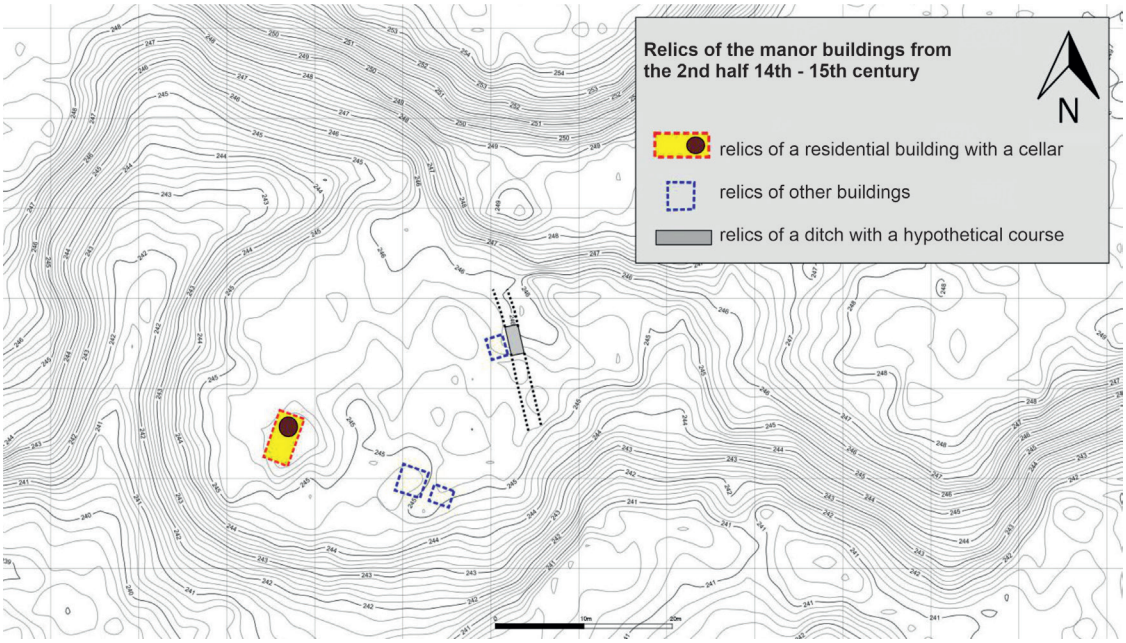

Fig. 3. Czechowice. Layout of buildings with residential and economic functions within the plateau of the site. Graphic design: R. Zdaniewicz

the rubble layer. In the eastern part of the manor house, there was a cellar, sunk into the ground, measuring approximately 3×3 m, the walls of which were probably originally lined with shingles wedged between posts placed in the corners, additionally covered with clay.[6] (Fig. 4) Relics of one such post were discovered in the north-eastern part of the site.[7] Since the cellar was dug into the sandy subsoil, such a construction of the walls prevented the backfilling of the interior. The cellar was roughly oval in plan, with a somewhat more linear and regular outline of the southern wall, arched and rounded in the northern part. The entrance was presumably located in its south-west corner, as can be seen by the shape of its exposed edge course in this part. A door or trapdoor led to its interior, as evidenced by the discovery of iron elements of its fittings, including a hinge hook and bolt.

The remains of presumably two above-ground buildings, the structures of which were based

[6] The botanical analysis of samples taken from the fill of unit no. 11 in trench no. 2, revealed the presence of charcoal from the following tree species: birch (*Betula* sp.) – 9 fragments, diffuse-porous – 27 fragments, common hornbeam (*Carpinus betulus*) – 1 fragment, oak (*Quercus* sp.) – 1 fragment, Scots pine (*Pinus sylvestris*) – 2 fragments. Source: Sady-Bugajska 2021.

[7] The botanical analysis of samples taken from the fill of unit 21 in trench 7, carried out by A. Sady-Bugajska, MA from the Silesian Museum in Katowice, revealed the presence of charcoals of the following tree species: linden? (cf. *Tilia* sp.) – 20 charcoal fragments, ranging in size from 10 to 55 mm (taxonomically – homogeneous sample: all fragments probably from a knot).

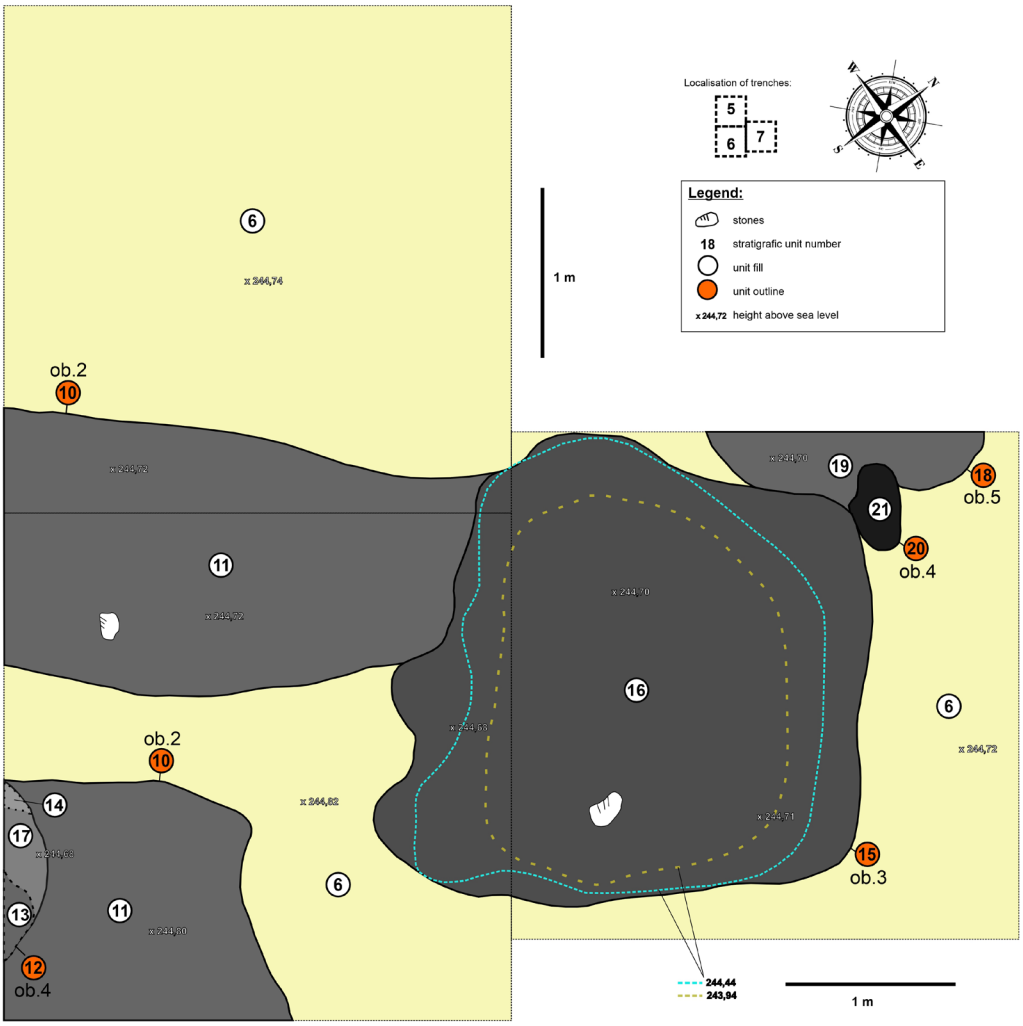

Fig. 4. Czechowice. Arrangement of stratigraphy and archaeological features discovered in trenches 5-7. Graphic design: R. Zdaniewicz.

on pillars, were located in the south-eastern part of the elevation plateau (Fig. 3). These structures were undoubtedly farm buildings, perhaps related to animal husbandry or storage (Figs. 3 and 5). Traces of a presumably linear ditch were found in the eastern part of the elevation, on the side of St George's Church mentioned in the introduction. Its function is difficult to determine with certainty. It is possible that the ditch, together with a palisade or a wooden fence, marked the boundaries of the manor farm, prevented livestock from moving away or played a defensive role. A less utilitarian function of the ditch is also possible, e.g., for ritual boundary ploughing or other apotropaic activities.[8]

An important question concerning the Czechowice manor house is the chronology of its existence. Unfortunately, samples taken from burnt elements of the structure submitted for radiocarbon studies failed to resolve this issue.[9] The dating is based on movable artefacts discovered in the fills of structures and cultural layers. Numerous fragments of ceramic vessels, stove tiles, elements of armament and other utility objects are certainly of late medieval origin (2nd half of the 14th-15th century). These artefacts have equivalents from other sites dated to this period.[10] In the fill of the trenches, isolated numismatic items were also discovered, dating from the 4th quarter of the 14th century to the 3rd quarter of the 15th century, among others, a bracteate heller of Duke Nicholas I of Opole from the years 1455-1470.[11] The manor house in Czechowice was probably destroyed in the last decades of the 15th century. Traces of burning, as well as weaponry, in the form of side shields of cutlasses or bolt-heads discovered in the fills of the cultural layers, indicate that the manor house came to an abrupt end, e.g., due to an armed invasion.[12]

[8] Wawrzeniuk 2016, 275-287.

[9] The ^{14}C analysis of charcoal taken from the relics of a wooden post (trench 7, unit 21), carried out by Prof. M. Krąpiec of the Absolute Dating Laboratory in Kraków, gave a calibrated result: 95% AD/BC: 1215-1285 Median: 1255. This result, in the context of the mobile finds discovered in the fill of structure 3 (cellar), should be considered unreliable. Perhaps it is related to the old wood effect.

[10] Zdaniewicz 2020a, 108-113.

[11] Milejski 2019.

[12] Zdaniewicz 2019b, 168-172.

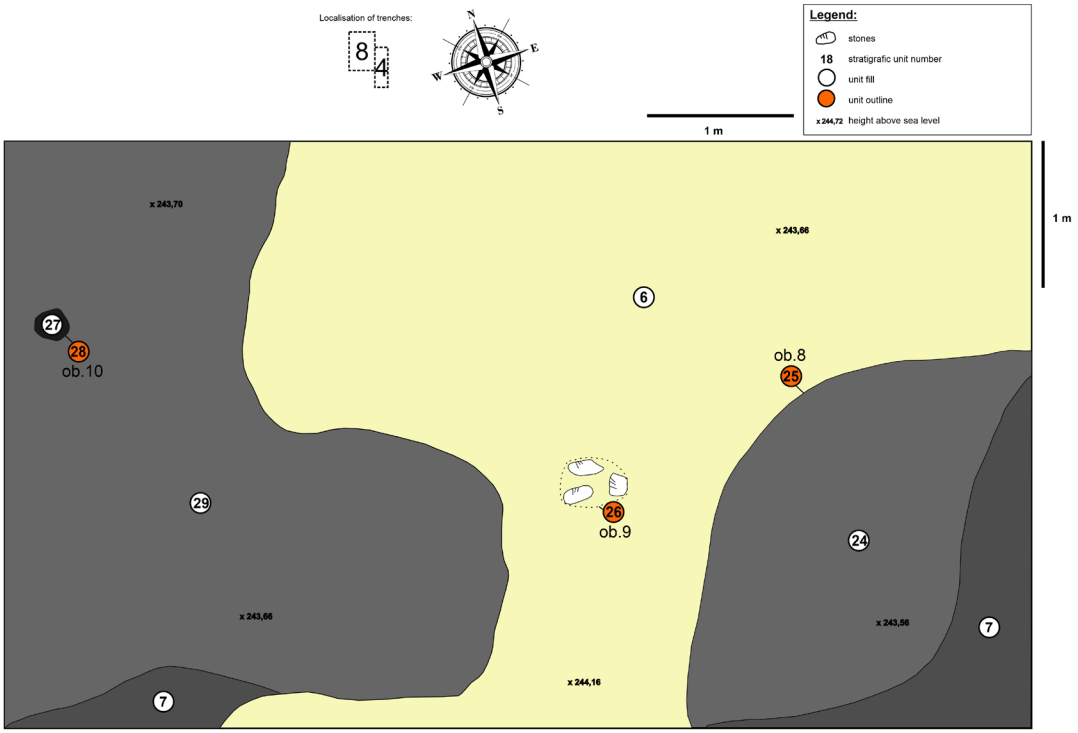

Fig. 5. Czechowice. Arrangement of stratigraphy and archaeological features discovered in trenches 4 and 8. Graphic design: R. Zdaniewicz.

Earthenware, metalware and other artefacts associated with the preparation and consumption of food

Various aspects related to the preparation, consumption and also storage of food in the late medieval manor of Czechowice can be deduced from the preserved relics of vessels. Unfortunately, the vast majority of these are highly fragmented shards. However, during the technological analysis of the ceramic material from the research, it was possible to reconstruct and separate at least several types of vessels used by the inhabitants of the manor. Certainly, they were mostly used as utility kitchen utensils, serving both food preparation and storage. Thus, there are pots and jugs with and without handles. They were usually made from ferruginous clays, although also those containing added calcium carbonate, as evidenced by the brick-red, creamy and white colours of the walls obtained after firing in an oxidising atmosphere (Figs. 6:a-f and 8:a-f). Unfortunately, due to the fact that the ceramic material from the survey is highly fragmented, it is difficult to determine the sizes and capacities of the pots and jugs in a meaningful way. Thanks to the preserved rim fragments, it can be established that the diameters of the lumen of the spouts of the former oscillated between 14 and 18 cm, which, when attempting to estimate and reconstruct the dimensions of the entire vessel, usually gave a volume of between 2.5 and 3.5 litres. During the reconstruction of the vessels, specimens of large pots with spout diameters exceeding 20 cm were also recorded (Fig. 7). Vessels of this type probably had a storage function and served as containers for storing, for example, grain.[13]

A vessel with cooking, but also serving table functions was certainly the jug. Notable among this category are specimens with slender, long necks, equipped with strap-like handles (Fig. 8:b-e). They were used primarily to transport liquids, although they may also have served as tableware. An example of this is a jug, a fragment of which was discovered during the survey, with a glazed surface, decorated below the spout line with a malleable, wavy roller (Fig. 8:c). Ceramic lids, fitted with separate, cylindrical handles, complemented the pots and jugs (Fig. 8:f-g).

Among the vessel shards, a fragment of a ceramic connector of a double vessel, known as a 'twin-pot' was also found. In folk culture, this type of vessel was usually used to transport food, such as delivering meals to the fields during harvest or other work.[14] It is possible that this type of ceramic container was a piece of equipment of the Czechowice manor. In addition to utility vessels, wide-necked bowls were also used both for preparing food and serving it on the table (Fig. 9:a-c). Smaller specimens of ceramic bowls were more likely to have had a table function, although they may also been used as oil lamps (Fig. 9:d).

This set of vessels is complemented by fragments of earthenware pans (tripods), which have

[13] A fragment of a pot filled with grain, mainly wheat and rye, was discovered during excavations of a manor house on a mound from the 15th/16th century in Kozłów in Silesia. cf. Kofel 2019, 95-111.

[14] Reinfuss 1955, 33.

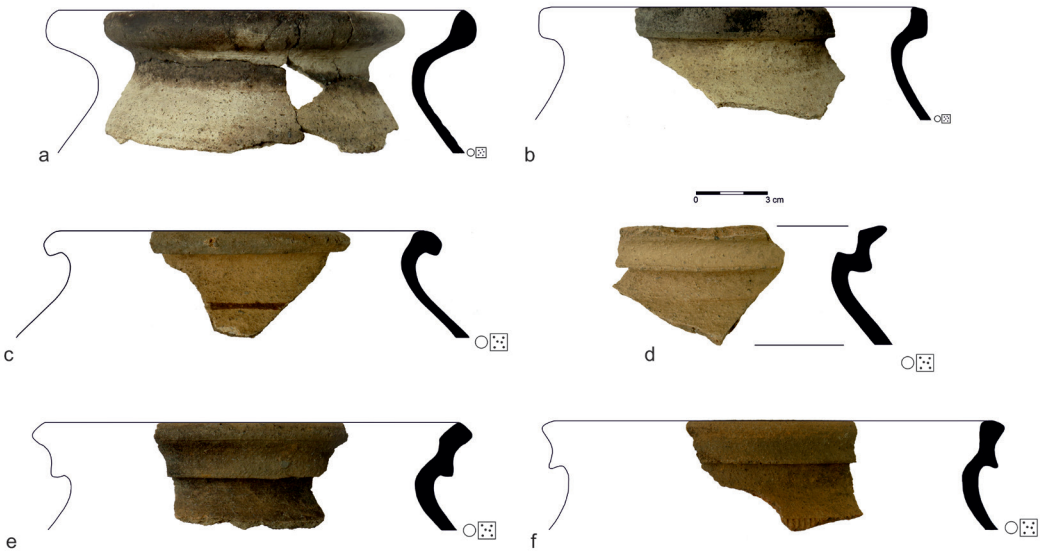

Fig. 6. Selection of pot/jug fragments discovered within the archaeological site. Graphic design: R. Zdaniewicz.

Fig. 7. Czechowice. Storage pot. Graphic design: R. Zdaniewicz.

prominent handles for wooden shafts, facilitating easy placing on the fire. In the course of the conservation work, it was possible to reconstruct a large part of a similar vessel, with the inner surface covered with a dark orange glaze (Fig. 10). The vessel was probably mainly used for heating food, as evidenced by the soot on its outer surface. However, it may also have been used to serve pre-heated food to the table.

No fragments were encountered in the ceramic material, which would certainly represent remains of goblets or cups. Vessels of this type were used on the tables of medieval knights' manors, as demonstrated by discoveries from other such sites.[15] Perhaps this is due to the aforementioned strong fragmentation of the ceramic material discovered in Czechowice.

Leaving aside a more in-depth technological analysis of the vessels in question, it should be pointed out that the vessels discovered during the research of the remnants of the Czechowice manorial site have numerous analogues among the ceramic materials dated to the 14th-15th century, coming from the research of other mound manors from the Upper Silesia area, e.g., in Pniów, Ciochowice or Ruda Śląska Kochłowice.[16]

Vessels with a similar function certainly included metal cauldrons on legs and Grapens (three-legged cauldrons) made from an alloy of copper with tin and lead, with the addition of antimony.[17] (Fig. 11:a-d). Unfortunately, the fragmentary state of preservation makes it difficult to determine definitively whether the discovered metal vessel pieces were parts of a single specimen or many. Metallographic research carried out using a spectrometer revealed considerable differences in the composition of the mass from which the individual fragments were made. This may indicate that the mass from which the vessels were cast was not evenly mixed and that they are relics of different specimens. The remains of Grapens found in Czechowice indicate that the metal vessels of this type used here had solid legs, triangular in cross-section. The preserved central parts indicate that the bowl of the vessels was modelled spherically. The single-rim fragment discovered came from a vessel whose spout lumen diameter was approximately 15 cm.

[15] E.g., Nowakowski 2107, 514-515.

[16] Zdaniewicz 2019a; Goiński et al. 2020, 55-59; Zdaniewicz 2020c, 14-18.

[17] The discovered Grapen shards were subjected to preliminary metallographic analysis with a Bruker TRACER 5i XRF spectrometer. These investigations should be considered preliminary and, at this stage of the work, were carried out only to determine the type of metal. Measurements were made point-wise on the mechanically cleaned inner and outer surfaces of the metal vessel fragments.

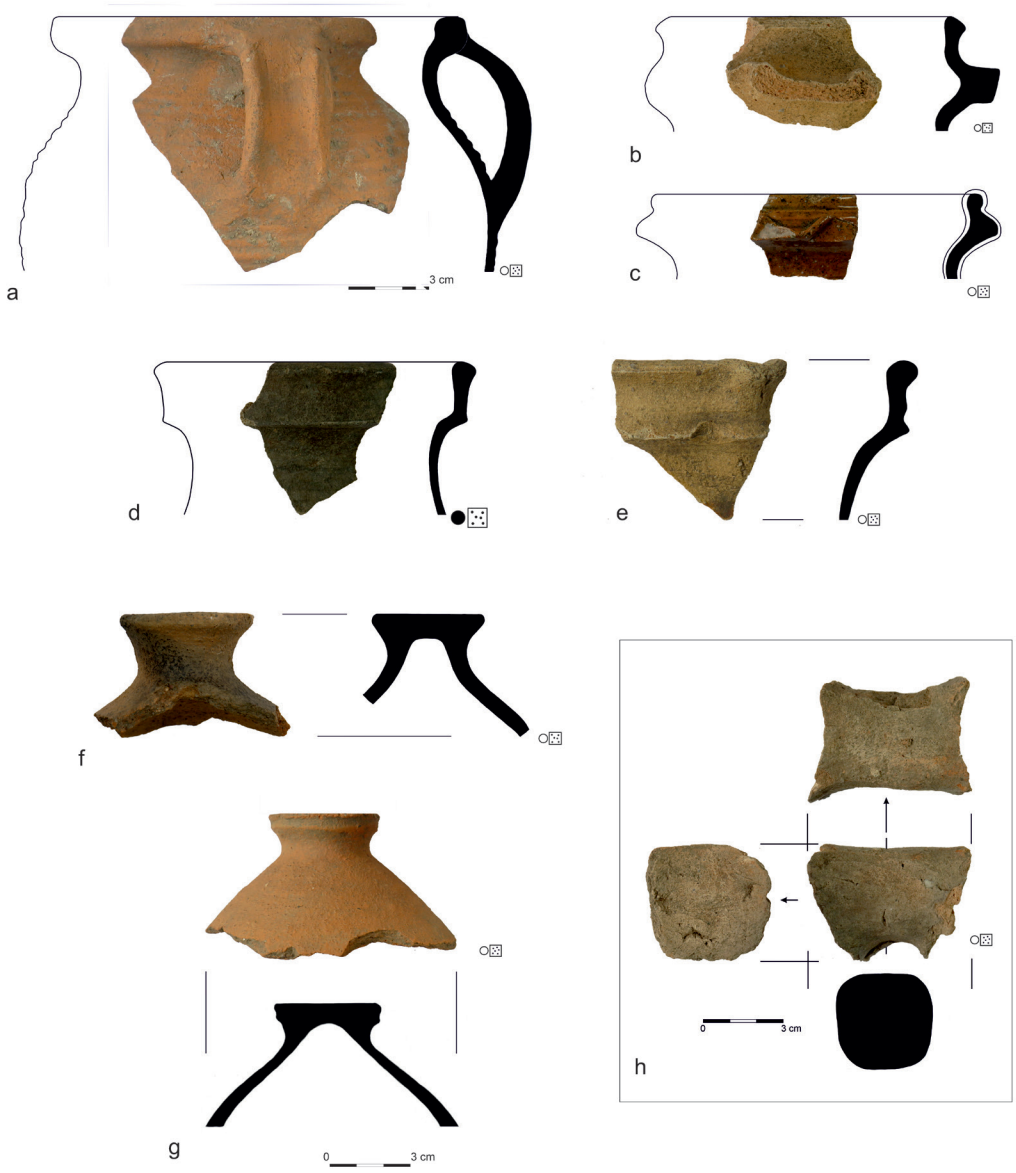

Fig. 8. Czechowice. Selection of fragments of jugs, lids of other ceramic vessels. Graphic design: R. Zdaniewicz.

On the basis of the discovered Grapen fragments, a hypothetical model of a specimen that was used in the kitchen of the Czechowice manor was made (Fig. 11:e). The fact that similar vessels were used for cooking in the late Middle Ages is confirmed by iconographic sources.[18] (Fig. 12) Remains of Grapens within medieval knights' manors in Upper Silesia are not common finds. They also indirectly point to the prosperity of the owners of the local estate, as these were certainly not vessels used in the kitchens of peasant households. Numerous artefacts of this type are known from the German area.[19] In the Czech Republic, a fragment of a metal Grapen was discovered during excavations of the Trosky Castle near the town of Jičín.[20]

Other individual metal artefacts can also be associated with the consumption and preparation of food. These include the blades of iron knives and tools that have a universal purpose but are also associated, for example, with the portioning of meat or vegetables (Fig. 13:a-b). More kitchen-related instruments were iron spoons. Single fragments of specimens found had long, sharply pointed handles, suggesting this may have been their purpose (Fig. 13:f-g). Only one of these specimens had a vestigially preserved bowl. Perhaps a shallow bowl of oval shape was part of the other (Fig. 13:h). Its form is quite universal, referring to specimens discovered, among others, in stratifications related to the use of the area of today's Old Town in Wrocław.[21]

[18] Backhouse 1990, 52.
[19] Krabath 2001, 32-35.
[20] Kalferst and Prostředník 1998, 426.
[21] Szajt 2021, 251-252.

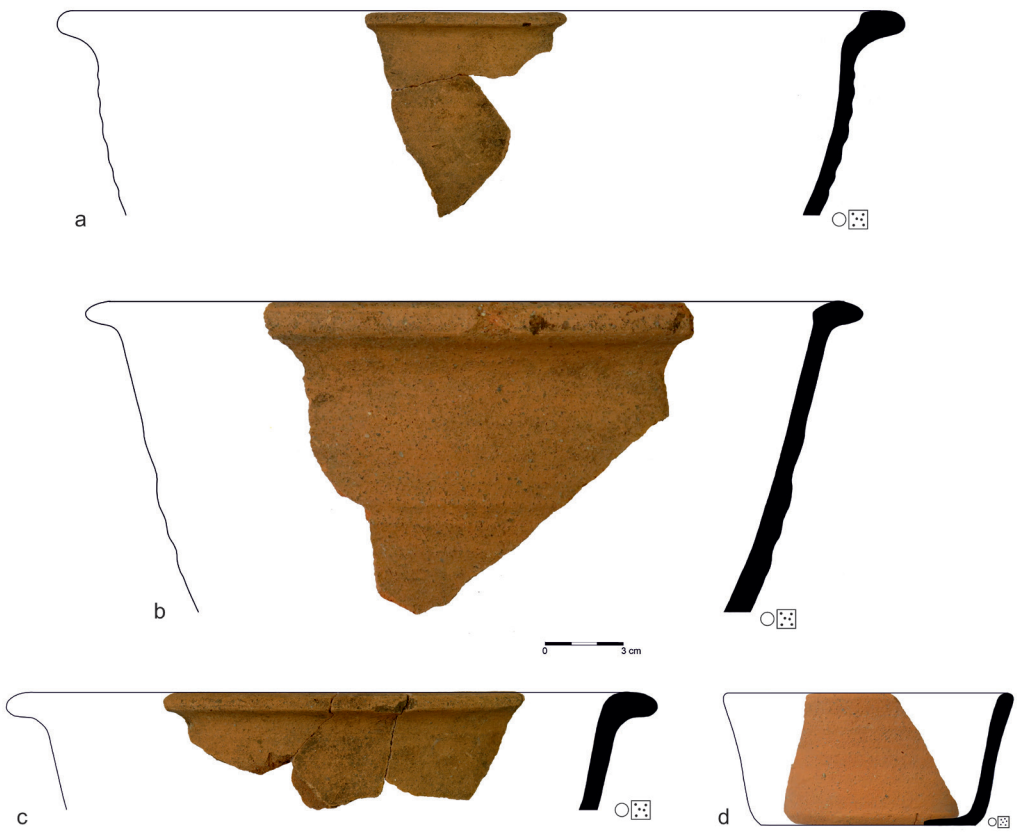

Fig. 9. Czechowice. Selection of fragments of larger and smaller bowls. Graphic design: R. Zdaniewicz.

A double-bladed hook with a sleeve, discovered in the fill of one of the storage pits in the northwestern part of the plateau – structure 4, is also associated with food preparation or preservation (Fig. 4). The function of such artefacts is not definitively determined, but specimens of similar construction discovered at early medieval sites, among others, are interpreted as hooks used to suspend fish and meat during the process of smoking or storage[22] (Fig. 13:d). Sun-drying and smoking were some of the most traditional and simplest forms of preserving meat from rapid spoilage.[23] The discovery of post-consumption remains indicates that meat was part of the diet of the settlement's inhabitants, so the discussed find from Czechowice may have originally had a similar function.

Fish was certainly also a component of the inhabitants' diet. Although there are no osteological finds that would indicate their consumption, a single lead object discovered may provide evidence of fishing by the inhabitants (Fig. 13:e), which could be used as a sinker for the net. It should be noted that folk traditions show that stone or clay sinkers, made of cheaper and more common material, were often used primarily to encumber nets, which was also influenced by economic considerations.[24] The proximity of the Bytom-Olecko-Siewierz lead basin meant that the availability of this raw material in Upper Silesia was much greater than in other regions, which meant that its use in the manufacture of small household items could be more widespread.[25] At this point, it is perhaps worth noting that numerous dykes have been located in the valley of the stream flowing at the foot of the site, indicative of the damming of the watercourse in the past (Fig. 1). Surveys carried out within one of them did not allow to determine the chronology of their construction. However, it is not excluded that small fish ponds were located here for the needs of the manor. Due to the numerous fasts resulting, for example, from religious traditions, the presence of fish on the table of the inhabitants of the manor in Czechowice would therefore not be unusual.[26] There was also a significant increase in fish

[22] Artifacts of similar construction were discovered, among others, at an early medieval settlement in Lipianki in Pomerania. Source: https://archeologia.pl/zabytek-miesiaca/zabytek-miesiaca-archiwum-2023/wczesnosredniowieczne-haki-zabytek-miesiaca-mag-maj-2023/ accessed on 25.05.2024.

[23] Dębińska 1963, 56.

[24] Znamierowska-Prüfferowa 1988, 94-95.

[25] Rozmus 2017, 17-29. Four lead rolls similar in form and shape were also discovered in the course of research on the relics of the medieval seat of Ciochowice in Upper Silesia.

[26] Dębińska 1963, 105.

Fig. 10. Czechowice. Ceramic pan. Graphic design: R. Zdaniewicz.

consumption in the late Middle Ages, due to the rulers granting fishing privileges to landowners.[27]

Within the Czechowice manor house, cooked meals were certainly subjected to heat processing. Perhaps a room, known from the peasant cottages in Poland, 'blackened with smoke,' traditionally called the black room, served this purpose.[28] However, they were not strictly kitchen spaces, but rather multifunctional.[29] A stove or fireplace was used, with a chimney to vent the smoke. Cooking was usually carried out over an open fire, either by placing dishes on or by the fire or by hanging them over it. Within the presumed main building, which probably formed the centrepiece of the farmstead, no separate cooking hearth was identified during the survey (Fig. 3). The discovery of a large amount of Earther floor, as well as stove tiles, indicating that there was a heating device in the building, but intended instead for heating the interior, is noteworthy. Perhaps, therefore, as pointed out by A. Marciniak-Kajzer in the context of other manors and available iconography, life in the Czechowice manor also took place within the yard, where food products were also prepared.[30] It cannot be ruled out that there may also have been a covered space, in the form of an above-ground shed, adapted to kitchen functions.[31]

A problem associated with the preparation of food was also its subsequent storage. The traditional method, known since prehistoric times, was to dig storage pits. The hollow in the ground provided at least insulation from the air temperature, both in winter and during the summer heat. A structure of this type for the inhabitants of the Czechowice settlement was the above-mentioned cellar, which accompanied one of the above-ground buildings (Fig. 4). Folk tradition confirms the use of such pits, both for storing cereal grains, but also vegetables or, for example, livestock products.[32] This is what L. Puszet wrote about this type of farm building in the early 20th century: *...However, what required storage was threshed grain, dried turnips and other supplies. The granary was, therefore, the first building alongside the living chamber – not, of course, in the strict contemporary sense of the word. Nor was it a building right from the start. Its origins should be sought in a parsk, i.e. an earth pit, burnt out when the ground was clayey and covered with bark in sandy soil. This was what gave rise to a building, partly a granary and partly a chamber, today's Lithuanian kleć….* [33]

[27] Kołodziejczyk 2013, 50-51.

[28] Puszet 1903, 47.

[29] Marciniak-Kajzer 2013, 454-457.

[30] Marciniak-Kajzer 2013, 457.

[31] An interesting record in this context is included in the Municipal Urbarium of the city of Gliwice dated to the year 1580. It contains a description of the castle built in the city by its owner, Frederick von Zetrycz. There was a wooden kitchen building with an additional room and a table next to the description of the residential building in the courtyard surrounded by a fence. This record shows that in 16th century Zetrycz castle, dishes were prepared in a separate building, which was part of the entire complex; Błaszczyk et al. 1988, 72-73.

[32] Moszyński 1929, 460-462.

[33] *…Co jednak koniecznie wymagało schowka, to wymłócone ziarno, suszona rzepa itp. zapasy. Za najpierwszy*

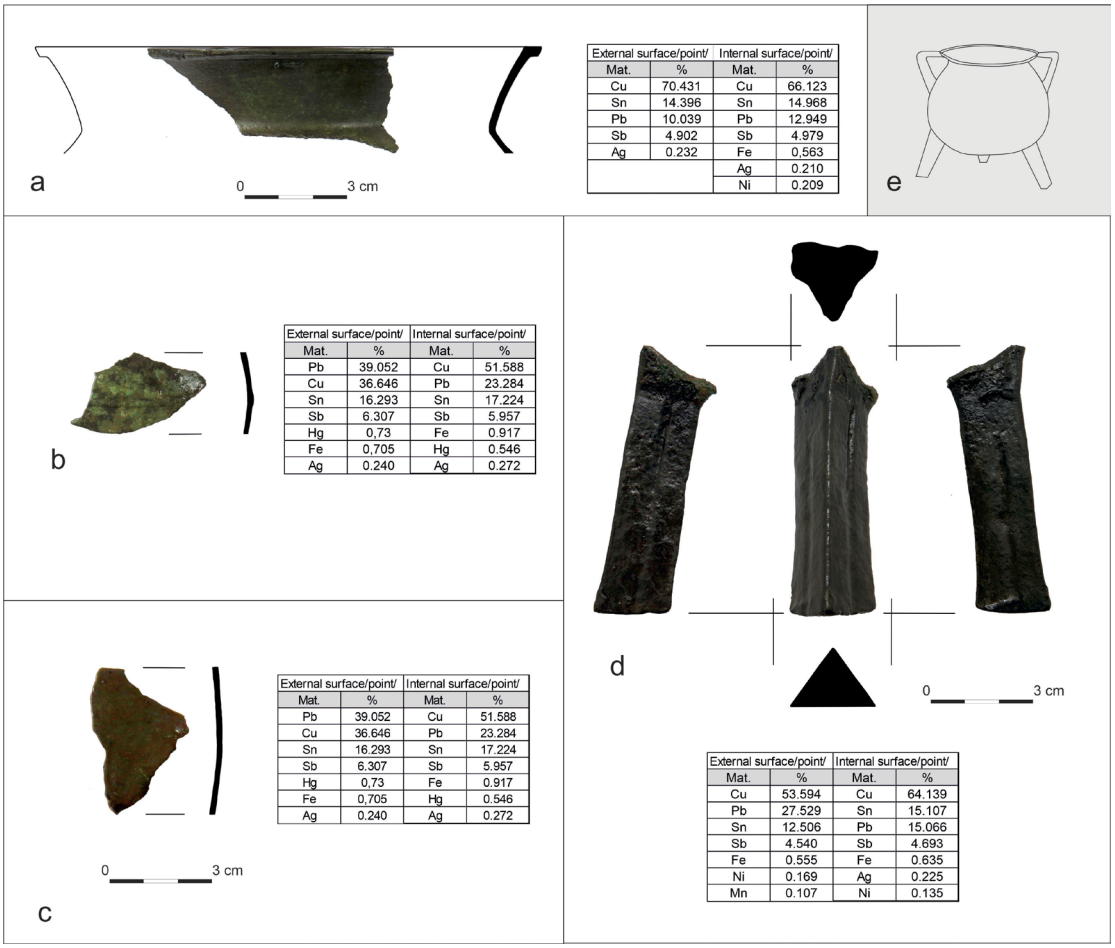

Fig. 11. Czechowice. Fragments of Grapens. Graphic design: R. Zdaniewicz.

Fig. 12. Cooking scene, miniature from the Luttrell Psalter, ca. half of the 14th century. Source: British Library, Catalogue of Illuminated Manuscripts, cat. no. MS Additional 42130. Public domain.

Residues of botanical substances

In the course of archaeological research, it is extremely rare to discover organic materials that would allow the diet of the inhabitants of late medieval manor houses to be reconstructed directly. In this context, finds of vessels in which the remains of prepared food have been preserved are extremely valuable. The walls of vessels used for cooking sometimes bear traces of stuck food, which are usually evidence of the food having been burnt during thermal processing or, for example, poorly mixed ingredients. Unfortunately, the preservation of such organic traces often requires suitable conditions for the deposition of such a burnt dish. The dry and sandy substrate in which the relics of the manor house in Czechowice and the structures associated with its use were discovered was certainly not conducive to the preservation of organic matter. Although traces of charred organic matter have been preserved on microscopic images of the inner walls of some vessels, it is difficult to determine whether these are the remains of burnt food or, for example, sooting of the surface during a fire[34] (Fig. 14).

The results of archaeobotanical analyses of soil samples taken from the fills of the structures also provided little information about the diet. They revealed, as mentioned in the discussion on the layout of the Czechowice settlement, only a large amount of charcoal, presumably the remains of burnt elements of the construction of the buildings, but also

zatem budynek obok izby uznać należy spichlerz — oczywiście nie w ścisłem, dzisiejszem znaczeniu tego słowa. Nie był on też odrazu budynkiem. Początków jego należałoby szukać w parsku tj. dole ziemnym, wypalanym, gdy grunt był gliniasty, a wykładanym korą w ziemi piaszczystej. Z tego po wstał dopiero budynek, trochę spichlerz i trochę komora, dzisiejsza litewska kleć…, after: Puszet 1903, 45.

[34] Photographs taken by R. Zdaniewicz using a Delta Optics Smart SMP pro electronic microscope. The amount of organic matter preserved on the walls, however, made it impossible to carry out meaningful physicochemical tests to determine the nature of the charred organic matter.

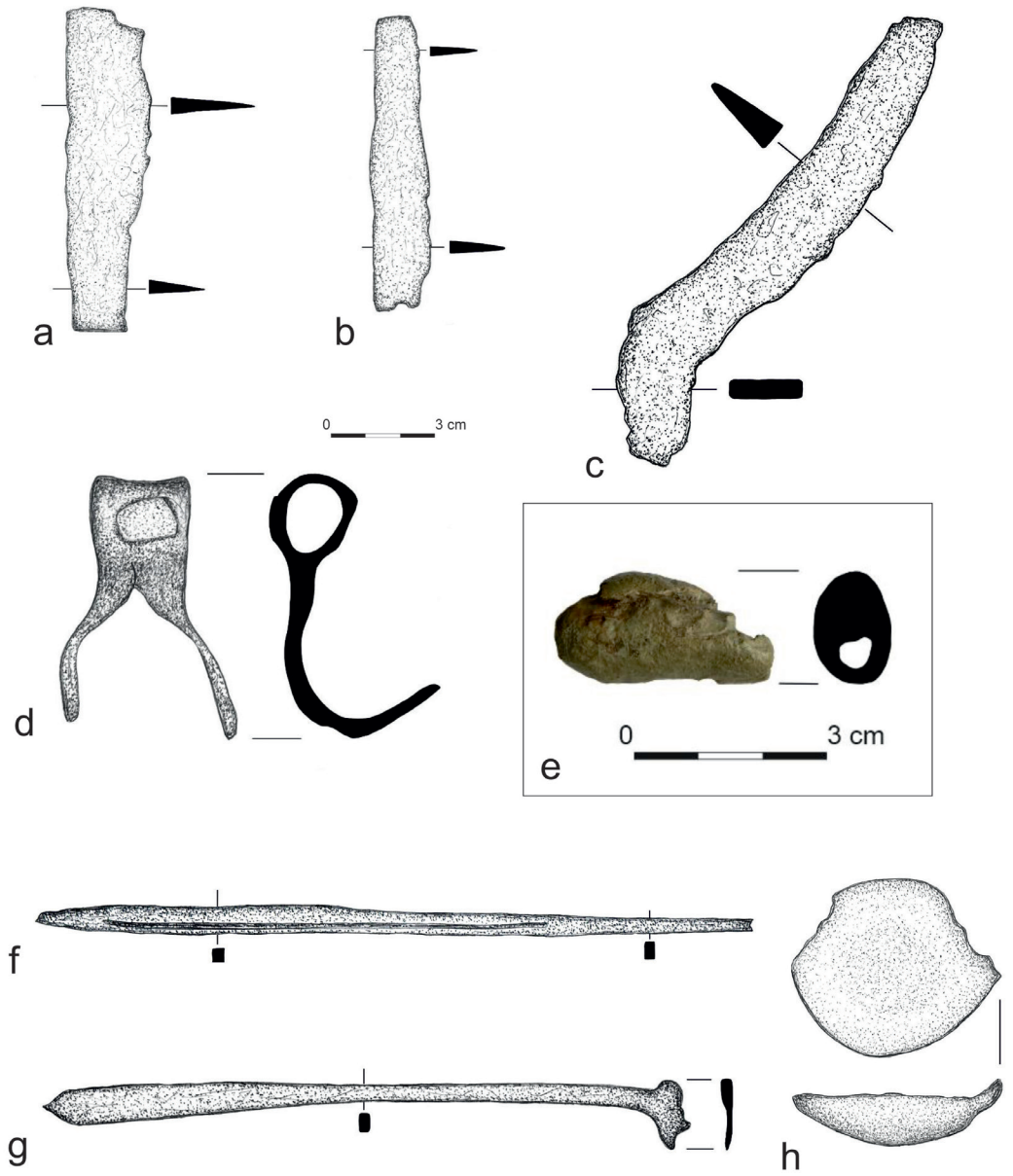

Fig. 13. Czechowice. Selection of functional objects discovered within an archaeological site: a-b – fragments of iron knives; c – a fragment of a sickle; d – a hook for hanging food (?); e – a lead coil – a net sinker (?); f-h – fragments of iron spoons. Graphic design: R. Zdaniewicz.

a negligible amount of burnt plant seeds, mainly inedible plants, which do not allow us to draw meaningful conclusions about their role in the diet of the manor's inhabitants.[35] What was valuable from the perspective of the above considerations was the discovery of the common millet caryopsis (*Panicum miliaceum*) in a sample taken from the fill of the ditch surrounding the compound on the eastern side (unit 31).[36] (Fig. 15) Millet was a cereal used to make millet groats, sometimes bread or beer, although the plant was also important in feeding livestock.[37] The importance of the *aventa* or *kucza* millet groats in the diet of Central Europeans in the 14th and 15th centuries was enormous.[38] It was a component of virtually all daily meals, both on manor and peasant tables. The discovery of millet grain indicates that it was present in the diet of the inhabitants of the local habitat.

The fact that cereal cultivation was an element of the everyday life of the inhabitants of the Czechowice manor is indirectly evidenced by the fragment of an iron sickle discovered in the cellar accompanying one of the buildings (Fig. 13:c). They were a traditional tool used for harvesting, very widespread in Slavic areas from the Middle Ages to modern times.[39]

However, in the fill of the cellar, discovered in trench 6/7 (unit 16) (Fig. 4), burnt white goosefoot

[35] Sady-Bugajska 2021.

[36] The ^{14}C analysis of burnt millet caryopsis extracted from the ditch fill (trench 9, unit 31), carried out by Prof. M. Krąpiec of the Absolute Dating Laboratory in Kraków, gave a calibrated result of: 92,2% AD/BC: 1395-1441; Median: 1415.

[37] Sady 2017, 66-67.

[38] Dębińska 1963, 110-113.

[39] Moszyński 1929, 190-192; Podwińska 1962, 148-165.

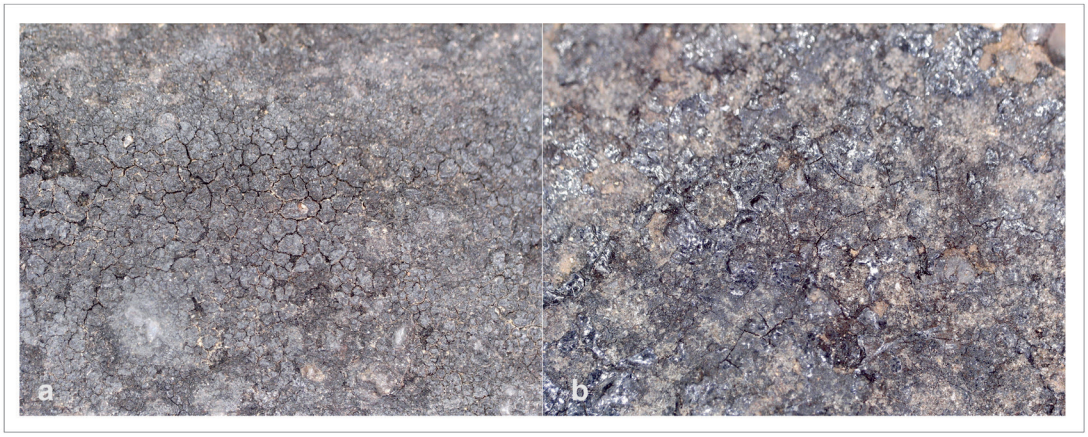

Fig. 14. Evidence of charred organic matter on the inner surfaces (magnification 10×) of selected vessels discovered in Czechowice. Photo: R. Zdaniewicz.

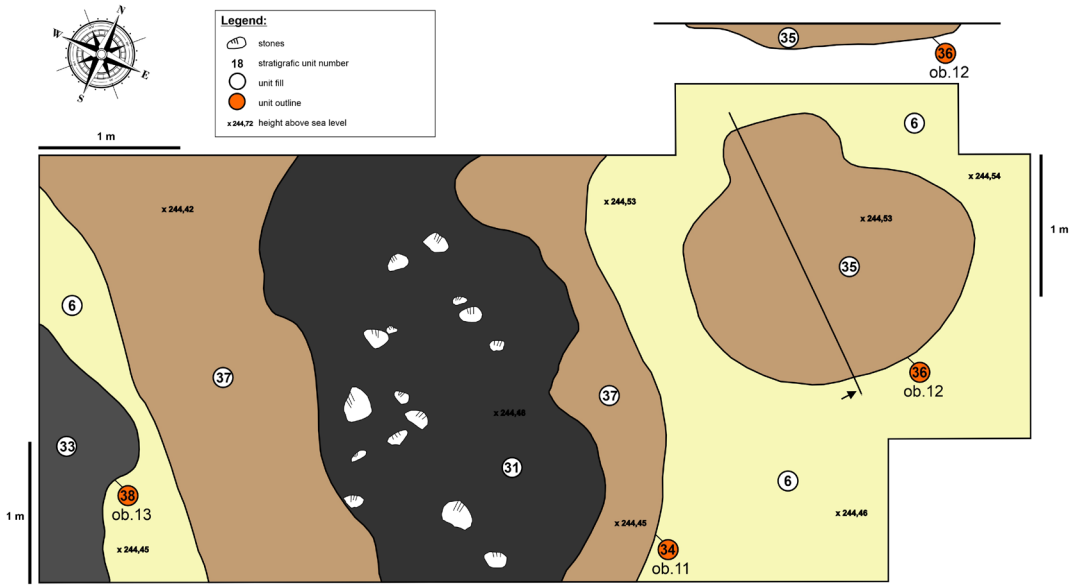

Fig. 15. Arrangement of stratigraphy and archaeological features discovered in trench 9. Graphic design: R. Zdaniewicz.

(*Chenopodium sp.)* seeds were encountered. This plant's seeds and young leaves are edible, a rich source of protein and carbohydrates. Considered a wild herbaceous plant, white goosefoot was harvested from meadows but also accompanied cereal crops as a weed.[40] Ethnological studies have shown that it was readily used as food by Central European and Balkan Slavs up to the 20th century.[41]

Animal skeletal remains as a source for understanding the meat diet

The sparse osteological material collected during the survey of the Czechowice site was used for a preliminary analysis of animal use and consumption. It came from the relics of a manor house located in the southern part of the hill. The bones were deposited here in a cellar (trench 7, structure 3, unit 16, dimension 3×3 m) identified by its eastern edge (Figs. 2-4). Animal remains were also recovered from an outbuilding, erected on the south-east side of the plateau (trench 8, unit 24, 29) (Figs. 2-3 and 5) and from a ditch located in the eastern part of the elevation (trench 9, unit 31, 37) (Figs. 2-3 and 15).

The material examined was notable for the characteristics of post-consumption deposit remains. The analysed animal bones were largely fragmented, and often only chip-like fragments were found. Negatives of sharp tool cuts and traces of cracks of varying orientation were visible on several of them. The observations made allowed for the examined collection to be considered as remains of eaten meat. During a macroscopic examination, evident traces associated with consumption were found on the fragmentary skull

[40] Lityńska-Zając 2005, 87.
[41] Moszyński 1929, 14-15.

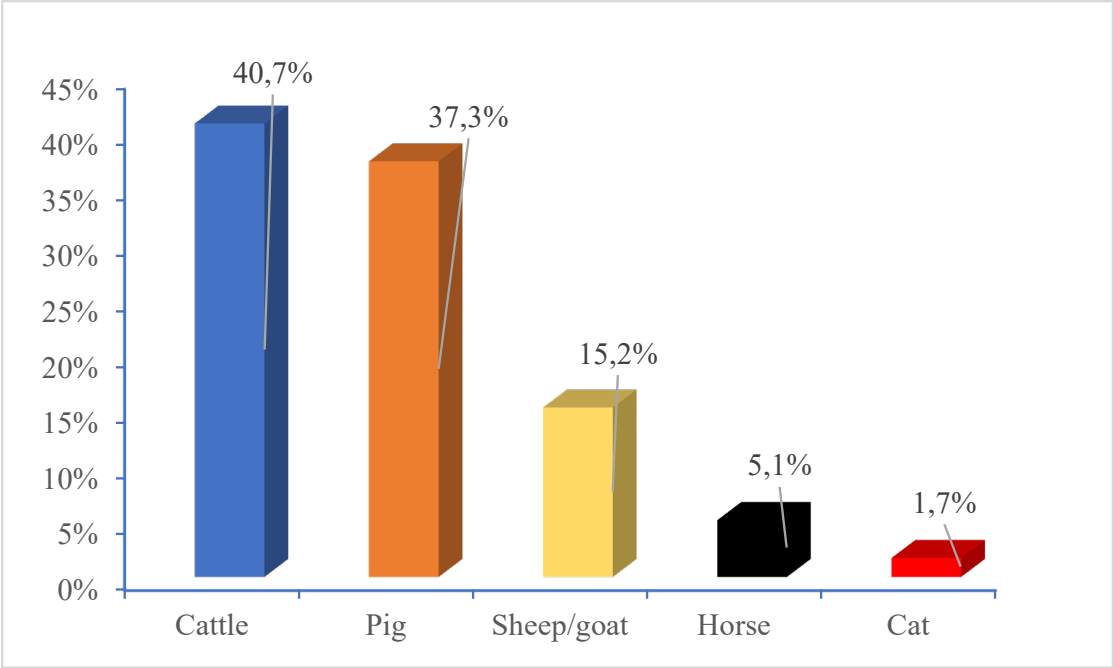

Fig. 16. Share (%) of mammals identified by species (n=59). Compiled by R. Abłamowicz.

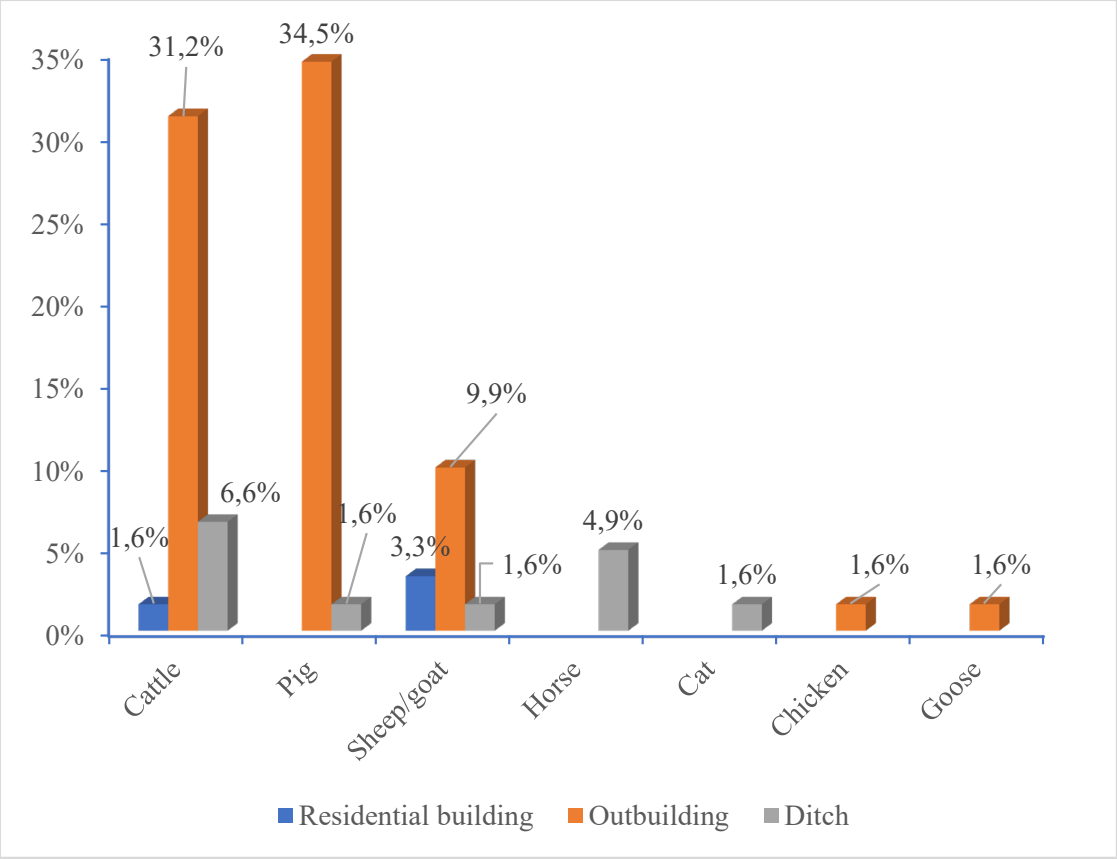

Fig. 17. Proportion (%) of tagged mammals and birds per feature category (n=61). Compiled by R. Abłamowicz.

of a horse (an individual over 20 years old, lying in the ditch) (trench 9, unit 37). Furthermore, all other analysed animal bones were also affected by taphonomic factors after being discarded. In many cases, destructive processes were recorded as a result of weathering. A damaged outer surface of the bones was observed with the presence of small splinters, as well as fragments with a rough and uneven surface.

The osteological material was subjected to a standard analysis taking into account species and anatomical composition.[42] The skeletal remains of sheep and goat, due to the high morphological similarity of the skeletons, were considered as one 'sheep/goat' group.[43] An assessment taking into

[42] Schmid 1972, 93-145; Popesko 2008, 112-121.
[43] Lasota-Moskalewska 2008, 82.

Table 1. List of zoological taxa and the abundance of their remains in each feature category. Compiled by R. Abłamowicz.

Animals	Residential building - manor house (trench 7, feature 3, unit 16)	Outbuilding (trench 8, units 24 and 29)	Ditch (trench 9, units 31 and 37)	Total
Cattle *Bos taurus* Linnaeus, 1758	1	19	4	24
Pig *Sus domesticus* Erxleben, 1777	-	21	1	22
Sheep/goat *Ovis aries* Linnaeus,1758/ *Capra hircus* Linnaeus, 1758	2	6	1	9
Horse *Equus caballus* Linnaeus, 1758	-	-	3	3
Cat *Felis catus* Linnaeus, 1758	-	-	1	1
Chicken *Gallus gallus domesticus* Linnaeus, 1758	-	1	-	1
Goose *Anser* sp.	-	1	-	1
Identified	3	48	10	61
Unidentified	1	29	5	35
Total	4	77	15	96

account the topographic division of the carcass was carried out for cattle and a pig according to the scheme proposed by Daniel Makowiecki.[44] It must be emphasised that due to the small number of skeletal remains, this study is only of an indicative nature. The age of the mammals at death was determined on the basis of the condition of their dentition.[45] The decisive feature in determining the sex of the pig was the shape and cross-section of the tusks and their alveoli.[46] Measurable bone remains were subjected to osteometric examination according to methods unified by Angela von den Driesch[47]. The height at withers (WH) of the cattle was calculated on the basis of the greatest lateral length (GLl) of the ankle bone using the appropriate coefficient.[48]

The surveyed collection comprised a total of 96 remains, of which zoological taxon affiliation was established for 61 or 63.5%. The vast majority of the material – 80.2% – was recovered from the outbuilding (trench 8), 15.6% from the ditch (trench 9), and the least, only 4.2%, from the residential building – the manor house (trench 7). The identified bones belonged to domestic mammals (96.7%) and birds (3.3%) – (Table 1). The first group was represented by cattle, pigs, sheep/goats, horses, and cats. In terms of numbers, cattle (40.7%) and pig (37.3%) bones were the most recognised, with sheep/goat in third place (15.3%). Horse bones featured a skull, tibia and metatarsal bones (5.1%) and cat bones – a single mandible (1.7%) (Fig. 16). As regards fowl, an ankle bone of a domestic hen and a radius bone of a probably domestic goose were recognised. In the residential building (manor house), remains of cattle and a sheep/goat were present; in the outbuilding, there were also pig and bird bones. In the ditch, all the identified mammal species were confirmed (Table 2, Fig. 17).

Anatomically, the remains of the identified species, due to the low sample size, belonged only to certain topographic parts of the skeletons (Table 2). In cattle, skeletal elements of the head, hand and foot were recorded from the low-value parts. The cervical vertebra, the ribs and the bones of the proximal parts of the thoracic limb were among the high-value parts of the carcass, while other parts from the spinal region and the pelvic limb were missing. In the case of pigs, bones of the head predominated among the low-value parts, while bones of the proximal parts of the thoracic and pelvic limbs were of high value, whereas elements from the spinal column and ribs were missing (Table 3). For the remaining species, only single specimens of bones have been documented.

The individual age of the cattle was determined for one animal to be around 7-10 years, for the pig for two animals to be 3.5-5 years and for 5-6 years. In the case of the sheep/goat, on two occasions, an animal was found to be 2-3 years old and once to be 4-5 years old. The age of the horse was estimated to be more than 20 years, and that of the cat was about 4 months old (Table 4). Sexual dimorphism traits, based on the three permanent tusks, were only established for the pig. In two cases, they belonged to males and, in a single case, to a female.

Bone measurements were taken on individual bones of cattle, pigs and horses. Height at withers was estimated only for the first species on the basis of the greatest lateral length (GLl) of the two ankle bones. The values obtained were 98.8 cm and 109.8 cm (Table 5).

Due to the sparse osteological material, the set of information obtained is relatively limited. The collected data on the fauna and the abundance of individual taxa can only provide preliminary information to

[44] Makowiecki 1998, 83.
[45] Lutnicki 1972, 30-101; Müller 1973, 279-282.
[46] Schmid 1972, 80-81; Habermehl 1975, 132-149.
[47] Driesch 1976, 79-80, 86-89, 92-93.
[48] Tsalkin 1970, 13-165.

Table 2. Anatomical distribution of tagged mammalian and avian remains per object category. Compiled by R. Abłamowicz.

Element	Residential building - manor house (trench 7, feature 3, unit 16)		Outbuilding (trench 8, units 24 and 29)					Ditch (trench 9, units 31 and 37)					Total
	Cattle	Sheep/goat	Cattle	Pig	Sheep/goat	Chicken	Goose	Cattle	Pig	Sheep/goat	Horse	Cat	
Skull bones	-	-	-	2	-	-	-	-	-	-	1	-	3
Mandible	-	1	1	1	1	-	-	-	1	1	-	1	7
Teeth	-	-	3	6	4	-	-	1	-	-	-	-	14
Cervical vertebrae	-	-	1	-	-	-	-	-	-	-	-	-	1
Ribs	1	-	8	-	-	-	-	-	-	-	-	-	9
Scapula	-	1	-	1	-	-	-	-	-	-	-	-	2
Radius bone	-	-	4	2	1	-	1	-	-	-	-	-	8
Metacarpal bone	-	-	-	1	-	-	-	-	-	-	-	-	1
Femur	-	-	-	4	-	-	-	-	-	-	-	-	4
Tibia	-	-	-	4	-	-	-	-	-	-	1	-	5
Ankle bone	-	-	1	-	-	1	-	1	-	-	-	-	3
Heel bone	-	-	1	-	-	-	-		-	-	-	-	1
Metatarsal bones	-	-	-	-	-	-	-	2	-	-	1	-	3
Total	1	2	19	21	6	1	1	4	1	1	3	1	61

Table 3. Distribution of bovine and porcine skeletal elements by carcass classes and subclasses. Compiled by R. Abłamowicz.

Class	Skeletal and carcass elements Head bones	Cattle		Pig	
		n	%	n	%
IA	Hand and foot bones	5	20.8	10	45.5
IB	Total bones of the less valuable part of the carcass and slaughterhouse waste	5	20.8	1	4.5
IA-IB	Vertebrae	10	41.6	11	50
IIA	Ribs	1	4.2	-	-
IIB	Thoracic limb bones	9	37.5	-	-
IIC	Pelvic limb bones	4	16.7	3	13.6
IID	Total carcass bones	-	-	8	36,4
IIA-IID	Skeletal and carcass elements	14	58,4	11	50

reflect on the meat consumed by its inhabitants. The data obtained allow us to conclude that livestock was the mainstay of the meat diet. Beef and pork were eaten equally, with occasional consumption of mutton and goat meat. In contrast, it appears that the horse was not of consumptive importance. Rather, the presence of the remains of this species is indicative of its lifetime use, most likely as a riding, pack or draught animal. The species was probably also used for ritual purposes, as indicated by the presence of a fragmentarily preserved skull of an individual over 20 years old found in the ditch (trench 9), on which no traces of butchery or culinary processing were recorded. It may be the result of intentional deposition as a foundation offering, a sign of the magical practices of the inhabitants. Similar finds are common in Slavic lands during the medieval period, with whole animals often deposited, but also only their heads.[49] The remains of a cat, confirmed at the site, in turn indicate that it was a human companion in everyday life, perhaps kept by humans for its hunting skills (e.g., protecting crops from rodents). The beef consumed by the inhabitants was the parts of the trunk (nowadays referred to as ribs), as well as the parts associated with the proximal sections of the foreleg (foreshank). In the case of pork, both the parts closer to the fore limb (shoulder, foreshank) and the parts closer to the hind limb (ham, hind shank) were consumed. The menu was supplemented with the head meat, which, in the case of the pig, was considered a source of very tender meat and was treated as a delicacy. This is due to the conformation of the pig, virtually the entire carcass of which is suitable for consumption.[50] It also cannot be ruled out that the fragmentation of the head bones found may have been due to taphonomic factors, which, together with the high distinctiveness of the cranial fragments, results in an over-representation of associated elements.[51] Due to the limited

[49] Lasota-Moskalewska 2005, 188-189; Abłamowicz and Makowiecki 2019, 137-142.

[50] Sobociński 1987, 90-140.

[51] Makowiecki 2008, 124-126.

Table 4. Assessment of the age of death of cattle, pig, sheep/goat, horse and cat based on dentition. Compiled by R. Abłamowicz.

Location	Species	Bone	N	Age
Outbuilding (trench 8)	cattle	mandible, M3 moderate to severe abrasion (++++)	1	7-10 years
Ditch (trench 9)	pig	bottom tooth, M3 light to moderate abrasion (++)	1	3,5-5 years
Outbuilding (trench 8)	pig	bottom tooth, M3 moderate abrasion (+++)	1	5-6 years
Outbuilding (trench 8)	sheep/goat	upper tooth, M3 light abrasion (+)	2	2-3 years
Residential building – manor house (trench 7)	sheep/goat	mandible, M3 moderate abrasion (+++)	1	4-5 years
Ditch (trench 9)	horse	skull (jaw)	1	over 20 years
Ditch (trench 9)	cat	mandible with CdPd3Pd4	1	about 4 months

Table 5. Bone measurements (mm) of cattle, pig, horse and height at withers (cm) of cattle. Compiled by R. Abłamowicz.

Location	Species	Bone	Measurement				
			Bp	Bd	GLl	GLm	WH
Outbuilding (trench 8)	cattle	ankle bone	-	-	60.0	(54.3)	109.8
Ditch (trench 9)	cattle	ankle bone	-	-	(54.0)	(50.0)	(98.8)
Outbuilding (trench 8)	pig	radius bone	29.0	-	-	-	-
Ditch (trench 9)	horse	tibia	-	(60.0)	-	-	-
Ditch (trench 9)	horse	metatarsal bone	-	(41.0)	-	-	-

number of data obtained on sex and age, it was not possible to know the structure of the herds. The few measurements obtained indicate that the cattle belonged to the short-horned type – *Bos taurus brachyceros*, consisting of low-growing animals between 90 and 110 cm in height.

The diet was supplemented with meat from domestic fowl (hens, geese). In terms of poultry farming, one might suspect that the frequency of their bones does not fully reflect the importance of this meat in consumption. The finer bird bones may have been more easily lost, destroyed or eaten by dogs.

The issues presented above concerning the outline of animal husbandry and use, which could be addressed on the basis of the sparse osteological material, should be treated tentatively. Their substantiation must be expected on the basis of analyses of the bone assemblages obtained from subsequent archaeological investigations. It should be stressed, however, that this type of multidisciplinary research on sites such as the manor house in Czechowice is still very rare in the Upper Silesian area. Therefore, it should be considered useful for studies covering the problems of medieval and modern farming and animal husbandry.

Archaeozoological analyses have recently been carried out for sites of a similar nature and period of use, namely a manor house on a mound in Ciochowice, site 1 (Gliwice district)[52] and the castle in Ryczów (Zawiercie district).[53] Comparing the strategy for animal husbandry and use at these sites and the Czechowice settlement, it can be seen that farmed mammals were the mainstay of the meat diet, and their order, as determined by the frequency of identified bones, is similar. The only thing noticeable is the different proportions in the population of the herds kept. At the Ciochowice and Ryczów sites, the difference between the bones of cattle and pigs, i.e., the two main farmed species, was clear and amounted to respectively: 26% and almost 39%, while in the case of Czechowice, it was only 3.4%. The coincidence of the menu and animal husbandry principles at these sites was also evident through the remains of hen and goose documented in the collections.

Conclusion

The discoveries made during the research of the knight's manor in Czechowice provide a modest but interesting starting point for research into the preparation and consumption of food in the late medieval manors of Upper Silesia. Unfortunately, natural conditions meant that only a negligible

[52] Abłamowicz 2023, 167-168.
[53] Abłamowicz forthcoming.

amount of organic matter, which is the most valuable source for dietary research, was encountered. It does, however, indicate that the inhabitants of the Czechowice Manor were involved in the cultivation of cereals and the rearing of animals, which provided both vegetable products and meat or dairy products for the local table. Fish consumption is a separate issue, as the results of the research have not provided direct traces of their presence. The fact that food was cooked, stored, and thermally treated in the manor house is evidenced by the discovered set of ceramic and metal vessels, as well as objects related to the cooking and consumption of food. Unfortunately, it was not possible to discover a specific food preparation area, although it appears to have been located outside the residential part of the farmhouse, perhaps in the open air or within an above-ground light-framed building. The uncovered storage pits or individual objects indicate that meat or other products were both stored and preserved naturally at the Czechowice Manor. Aiming to conclude, therefore, it is difficult to draw a complete picture of the sphere of life represented by the consumption, preparation and storage of food by the inhabitants of the manor on the basis of the research results presented, but they certainly provide an interesting and important example for comparative research with other late medieval settlement sites of this type.

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Disclosure statement

No potential conflict of interest was reported by the authors.

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