Archaeological research at Grodno Castle in Zagórze Śląskie from 2017 to 2019

Introduction

Grodno Castle (formerly Kynsburg) is located in the town of Zagórze Śląskie (Świdnica district) in the southern part of the Wałbrzyskie Mountains. The castle was erected on the summit of Choina Mountain at an altitude of about 450 m above sea level. From this location, there is a panoramic view of the Sowie (Owl) Mountains and the Wałbrzyskie Mountains as well as its foothills. Choina Mountain rises on the left bank of the Bystrzyca River and its valley forms the border between the Sowie Mountains and the Wałbrzyskie Mountains [1]. From the location of the castle, visitors can see Świdnica, which is located about 16 km to the north. During the Middle Ages, Świdnica was the capital of the principality and the city of residence for the Świdnica Piasts. Grodno Castle was possibly built at the end of the 13th century on the initiative of Prince Bolko I of Świdnica. Before the castle was built, a watchtower was reported to have functioned there to guard the trade route running from Świdnica through the Bystrzyca valley to Bohemia [2]. However, no extensive archaeological research aimed at verifying the information provided in the literature on the subject about the origins of Grodno Castle has ever been carried out. The aim of this article is to present and discuss the results of the archaeological research conducted by the authors from 2017 to 2019 that will contribute to a discussion on chronological phases of the castle’s origins and existence.

The earliest source reporting on the functioning of the castle came from the 14th century [3, a detailed list of sources here]. The expansion of the building included the largely preserved upper castle which took place during the reign of Prince Bolko II. After the death of Duchess Agnieszka (1392), the widow of Bolko II, the castle and the entire Duchy of Świdnica-Jawor came under the rule of the kings of Bohemia who sold it to private hands. In the 15th century, the castle frequently changed owners. For example, Georg von Mühlheim Puschke (Puczek) possessed the castle in the years 1429–1463. The family of Zettritz (Czetryc) is also mentioned among the owners of the castle and the surrounding estates at that time. In 1463, the stronghold was taken by the Bohemian King George of Poděbrady possibly as a result of an armed attack. The Zettritz family (Czetrycowie) regained the castle after paying the king 1600 Hungarian guilders [4]. The period of the greatest prosperity and the reconstruction of the Gothic stronghold into a Renaissance style residence took place during the years 1545–1587 due to the Logau family. The castle buildings began to gradually decline during the 17th century, especially the period of the Thirty Years’ War. Destruction of the castle occurred after the occupation by the Swedes, a subsequent lack of renovations, and disrepair caused by natural disasters. As a result, some of the buildings of the upper castle collapsed in 1789. Then in 1823, Gottlieb Büsching, a professor at the University of Wrocław, as well as historian and archaeologist, spearheaded some restoration of the castle, and it was opened to the public. After his death in 1829, the castle became the property of subsequent heirs and gradually expanded.

* ORCID: 0000-0002-1505-1279. Institute of Environmental Biology, Wrocław University of Environmental and Life Sciences, e-mail: biel.radoslaw@upwr.edu.pl
** ORCID: 0000-0002-4306-0404. Institute of Archaeology, University of Wrocław.
*** ORCID: 0000-0002-6326-8181. Institute of Environmental Biology, Wrocław University of Environmental and Life Sciences.

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In 1868, for example, the family crypt consisting of two cellars located under the west wing was inaugurated.

As mentioned, the archaeological research on Grodno Castle has so far been carried out to a very limited extent. As a result of works in the 1980s, the foundation of a structure – older than the 14th century buildings – was discovered in the courtyard and under the northern wing of the upper castle [5]; however, the full results of these studies have yet to be published. The aim of the archaeological research conducted in recent years was to identify the contexts of formation, nature, and chronology of the layers forming the embankment located on the zwinger (Fig. 1). Excavation research started in 2017 [6], and then continued in 2018 [7] and 2019 [8]. At that time, three probing trenches numbered 5, 6, and 7 were marked out (Fig. 2). The trenches numbered 1–3 were made in December 2016. Further checks on some of the geophysical anomalies revealed during GPR surveys in the courtyard of the upper castle and in the cellars turned out to be partly natural and partly caused by the grounding of the lightning rod. The following text does not describe the results of surveys 1–3 in more detail because they are of little importance for learning about the history of the castle.

The stratigraphic units (stratigraphic units, here abbreviated to JS, layers and archaeological objects) discovered during the excavations were explored by hand whenever possible. The soil excavated from the trenches was heaped next to them, and then searched again for small relics that had been lost during the exploration. Taking into account the specificity of the studied site [6], metal detectors were used which allowed for the in situ location of some finds to be determined, such as boltheads. During the excavations, descriptive, photographic, and drawing documentation was prepared on an ongoing basis. After completion of the exploration, a three-dimensional model of each survey was made using Structure from Motion (SfM) photogrammetry techniques [9]. The acquired movable historical material was inventoried, preserved, and subjected to material, stylistic, typological, and chronological analyses that established the absolute dating of the discovered stratigraphic units.

Stratigraphy of cultural layers on the zwinger and the courtyard of the upper castle

Further on in this article, the stratigraphy of the archaeological layers is briefly presented along with their functional and chronological interpretation which starts with the oldest layers in the deepest parts of the trenches. In some of the trenches, especially in No. 5 located along the outer northwest perimeter wall of the upper castle (Fig. 2), the bottom of the trench is a bedrock in the form of Sowie Mountains gneiss. The slope of the mountain was falling rapidly about 2 m from the face of the wall and was covered with dark brown sand mixed with a weathered rock, the thickness of which increased in proportion to the distance from the castle wall. The lack of archaeological finds in this layer is most likely due to natural processes taking place before the construction of the castle. After all, traces of the first use of the land in the Middle Ages are relatively modest with the oldest monuments dating back to the 14th century. Possibly during that period of time, the settlement activity focused on the upper castle; therefore,
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which was considered as an attempt to level and clean the area after the fire (JS 5005, 6003). Also, the next early layers (JS 5004, 6002, 7004), dating back to the 17th and 18th centuries, showed signs of fires. They were heterogeneous, mixed layers of debris, burnt, and sandy humus which is difficult to interpret if they are separated into more precise and smaller stratigraphic units. They illustrate the declining phase of the functioning of the upper castle and its slow decline from the Thirty Years’ War to the collapse of the northern wing in 1789. The remains of the latter seem to be two large fragments of walls found in the ceiling part of this level (JS 7003 and 7002). The last horizon was made up of contemporary layers, almost 2 m thick (Fig. 4), consisting mainly of rubble, bricks, stones, sand, and humus (JS 5001 and 5002).

In the case of the courtyard of the upper castle, eight stratigraphic units were distinguished [6], revealing at the same time that the southern and western wings were built during one construction stage. This is evidenced by the fact that the latter was not added to the finished building but joined by tooting. However, due to the small area of...
edict XIII (Pontificate, Avignon obedience 1394–1417)³, coins, glass cups, and pottery (Fig. 5).

The oldest coins found during excavations were issued at the beginning of the 15th century. Medieval money is represented by the Prague groschen of Wenceslaus IV of Luxembourg (1378–1419) and 15th century city coins from Silesian centers. These are hellers and bracteates from the following mints: in Ziębice (bracteate with the gothic letter M and heller – the uncial letter M/Lower Silesian eagle in the shield), in Wrocław (heller in a square with a Bohemian lion walking to the left around the letter W-RO-WR/in a square heraldic eagle with head to the right, around the letter MW-MO-W), in Świdnica (bracteate with a representation of a boar’s head facing right), in Głogów (heller with gothic letter G/eagle in a shield), and in Kożuchów (heller with gothic letter M/Tower defensive). A fragment of a poorly legible coin was also found with a cross dividing the reverse into four parts filled

exposed joints and the nature of the stone structures, these findings may be incorrect. At the same time, the offset of the southern wing wall was in contact with almost all the exposed layers without any clear trace of a construction trench, which could suggest their formation during or after its completion. It is only in the case of JS 8005 that we are not certain about this because its exploration has been abandoned for safety reasons. Nevertheless, the researchers suggested that it was the usable layer before the final four-wing buildings around the courtyard were formed [8].

Analysis of archaeological finds

Archaeological research has provided a large collection of archaeological finds that are important sources of information about the following: heating devices operating in the castle, roofing, metal accessories related to the construction and equipment of buildings and everyday life in Grodno Castle. Good chronological markers which allow for a fairly precise determination of the chronology of individual stratigraphic units are the papal bull of Ben-

³ Ł. Orlicki presents a detailed analysis of the bull in this issue of “Architectus”.

Fig. 5. Zagórze Śląskie, Grodno Castle. Selection of artefacts: a–c – bottoms of glass goblets, d – iron key; e – a wooden chess piece, f – a fragment of a cylindrical vessel, g – stoneware of the Falke group; a–c, e, g – trench No. 6, JS 6002; d – trench No. 2, JS 2003; f – trench No. 7, JS 7002 (drawing by A. Konicka, N. Lenkow, elaborated by M. Konczewska)

with dots, and this was interpreted as a Dutch or English sterling from the 17th or 18th centuries. Additionally, this coin had a hole pierced through it, which may suggest that the coin was worn as a pendant 4. The remaining coins discovered in the castle come from the 20th century.

Among the fragments of glassware, spouts and feet of flute cups were identified (Figs. 6a–c), with the bottom pushed inside and a foot made of glass tape or thread wrapped around the edge of the bottom. There were also fragments of colorless glass cups with nodules in the form of pimples stretched upwards and a fragment of a vessel with large oval bumps. One of the fragments is considered to be that of a blown cup decorated with ribs that is also made of colorless glass. Flute cups were very popular in Silesia where they appeared around the mid-14th century and were used approximately through the 16th century. They are found in the Czech Republic, Saxony, northern Germany and Scandinaavia. The forms characteristic of Silesia are cups with large oval bumps that date from the 14th and 15th centuries. Cups with pimples and ribs have a similar chronology [10].

An interesting find is a fragment of a stoneware vessel from the so-called Falke’s group, and it is decorated with a square stamp with four points (Fig. 6g). Characteristic for this group of products are cylindrical and pear-shaped cups as well as spherical jars made of gray stoneware and covered with brown-red engobe. They are also ornamented with stamp decorations and figural reliefs. Finds of this type of vessels are concentrated mainly in Silesia, Lusatia, and Saxony where they are dated to the turn of the 14th and 15th centuries. Their distribution covered distant areas of central and northern Europe [11]. The origin of the so-called Falke’s group is not definitively established. Bautzen and Zittau are mentioned as places of their production and other local centers [11], [12]. As evidenced by their presence in cities, castles, and monasteries, these richly ornamented stoneware vessels were undoubtedly luxury products. Ceramic vessels are among the most numerous category of artifacts discovered during our research at the castle (11 265 fragments). Among the forms, there were pots, bowls, lids, three-legged pans, jugs, plates, and cups (Fig. 5). There were also fragments of large thick-walled vessels with a hood-shaped spout. The surfaces of the dishes were smooth or decorated with circumferential grooves, folds modeled in the wall, a stamp ornament (Fig. 6f), a crest (Fig. 5l), and single or multiple strips painted with red dye (Figs. 5a–e). The outlets of late medieval pots are represented by variations of the hood (Figs. 5a–c, k, n) and the flasks (Figs. 5d, e, m). The edges of tall, slender eaves profiled from outside the castle were characteristic of the 2nd half of the 14th as well as in the 15th centuries [13].

A fragment of a Monk and Nun style roof tile made of clay fired brick-red has been preserved from the former roofing of the castle. The context of the discovery of this artifact (trench No. 6, JS 6004) allows it to be linked with the reconstruction of the castle in the 16th century.

Roof tiles of this type – along with trough tiles and various crown and plain tiles – were popular in the late Middle Ages in most Silesian towns. They were mainly used to cover the roofs of churches, townhouses near the market square, and castles [14], [15]. During the research, several fragments of zinc plates were also discovered which can be linked to the roofing in the form of fish scales. Hundreds of nails discovered in the burnt layers from the 15th century (JS 5004, 6004 and 7005) are probably connected with the structure of the roofs of the upper castle, some with adjacent fragments of charred wood. Most likely, they are remnants of the roofing shingles.

The glazing of the window openings is confirmed by fragments of lamps, 27 pieces of stained glass panes, and nine pieces of lead frames, as well as glass panes with a thickness of about 1 cm. The glass windows consisted of small panes joined together by lead lamellae. Panes made of lead framed lamps were commonly used and complemented by inter-cellular triangles. In central Europe, the oldest form is considered to be diamond-shaped glass in use from the 2nd half of the 14th to the 17th century. Tiled windows do not appear until the 17th century [16], [17]. The castle rooms were lit with candles and lamps as evidenced by the presence of wick scissors and a fragment of a torn lamp holder.

Metal building hardware is related to the structure and equipment of buildings. The most numerous examples are iron. For example, forged nails of various sizes that were used to connect wooden elements. The longer ones were probably used to connect construction beams, medium-length ones for nailing hinges and construction fittings, while small nails were used mainly for furniture. The survey excavations also found hooks, staples, and construction wedges, three staples, two leaf keys, a keyhole fitting, two fragments from the 20th century door locks, and two chest handles. The uncovered U-shaped staples could have been part of the dents used to close the doors of cottages and even manors until the end of the 18th century [18].

The remains of the heating devices are two pieces of ceramic floor tiles that can be combined with a hypocaust stove and 402 pieces of stove tiles. Heating with warm air appeared in Silesia in the 13th century [15]. Warm air was distributed through short channels through openings in the floor and entered the room above the stove. The floor tiles with heating openings were provided with an omni-directional groove for inserting a cover that closed the opening. Stove tiles are represented by two types of tiles: simple vessel type and complex relief type (Fig. 7). They are made of clay with a fine-grain slimming admixture, then fired in an oxidizing atmosphere to a cream or cream-gray color. In the case of simple tiles, they were also fired to a brick-red color. The collection is dominated by simple tiles and over 80% of those are made with a potter’s wheel. The fragmentary state of preservation makes it impossible to determine whether they are pot or bowl tiles. Six fragments of spherical tiles were also found in the group. Among the pot or bowl tiles, there are examples with smooth and grooved walls and with round (Fig. 7d) and square holes (Fig. 7e). The side length of tiles with square holes is over 13 to 14 cm, and the diameter of tiles

4 The authors would like to thank MA Paweł Milejski for his help in identifying coins.
with round holes is approximately 13 cm. The edges of the opening were most often inclined inwards; less often, they were straight or obliquely cut or turned outwards. Relief tiles consisted of a facing board butt joint with an open chamber. The places of connection were glued on the inside with clay. Fragments of middle facing tiles, a fragment of a corner tile, and a cornice tile with a length of over 11.5 cm were noted. The faces were decorated in relief with convex figural, floral, and geometric motifs (Fig. 7a–c). Decorations were imprinted in a matrix. Some of the specimens were covered with green, yellow-green, brown, or navy-blue glaze. The only tile that could be partially reconstructed was rectangular, $17.8 \times 18.8$ cm in size and not covered with glaze. Unfortunately, the state of its preservation did not allow the depth of the chamber to be reconstructed. In the discussed specimen, men fighting with swords and bucklers was placed, among others, on the southern façade of the Wrocław town hall from the 1480s [19]. Bucklers were a popular type of weapon in the Middle Ages, used during battles, duels, and trials by ordeal (judgment of God). Tiles depicting swordsmen fighting with swords and bucklers date to the 3rd quarter of the 15th century and were found in the basement of a tenement house in Jawor and at the top of Ślęża [20]. Tiles with a similar theme from the 2nd half of the 15th century are known from the area of Moravia, including the castle of Bouzov and Olomoúc [21]. By analyzing the metric and technological features, morphology, and the ornamentation of the stove tiles, the conclusion can be drawn that they come from the construction of several stoves from different time periods. The oldest stove, dating back more or less to the mid-15th century, probably consisted of two parts – a lower one made of vessel tiles and an upper one made of relief tiles with a dual motif. The whole structure was topped with a dome made of spherical tiles. Among the fragments of renaissance and baroque style tiles, the presence of corner and cornice tiles from different stoves was noted because they differed in glaze color and style. At least one of the stoves was built on a quadrilateral plan, and the individual segments of the other were separated by a cornice. The rectangular form provided a larger heating surface and was easier to build and more convenient for loading the charge than a round furnace. Stoves with ornamented tiles, apart from their heating function, were a decorative element of the interior and could function for several decades or even centuries.

In Silesia, pot tiles were used to build stoves as early as the 14th century. In the 1st half of the 15th century, bowl and spherical tiles appeared. These forms were also popular in the 16th and early 17th centuries, and their disappearance did not take place until the 18th century [22], [23]. The collection of late medieval military items discovered at the castle (Fig. 8) includes a ranged weapon (five projectile points), a spear (spearhead sleeve), and elements of equestrian gear (type III spur according to Hilczerówna). Two fragments of iron horseshoes can probably be
connected with the last category. The obtained points with a square leaf and a round sleeve were classified as crossbow boltheads. The problem of determining the functions of the iron tips and distinguishing the weapons from which they were fired is based on the criteria of weight and the diameter of the sleeve outlet, both of which have been controversial for years [19]. Among the items with a universal function are knives (seven items) and belt parts (represented by three buckles, including one with a profiled frame); these artifacts all deserve more scholarly attention. Weaving, embroidery, and tailoring in the Middle Ages and later were often activities performed mainly by women. A spindle, two metal thimbles, five pins and a needle were discovered in the castle. Finds related to games (bone dice, a chess piece, and three glass balls) prove that entertainment played an important role in the lives of the castle inhabitants.

Summary

As a result of the research, six phases were distinguished within the relative chronology of the registered layers forming the embankment on the zwinger. Starting with the earliest phase, they are as follows:

1) the beginning of the castle’s functioning, activities concentrated within the upper castle dating back to the 14th century,
2) construction of a hypothetical parkan at the beginning of the 15th century,
3) destruction of the parkan and a fire as a result of a siege that took place around the middle of the 15th century,
4) cleaning and reconstruction of the castle in the 16th century,
5) gradual degradation of the upper castle in the 17th and 18th centuries,
6) works related to the conservation of the castle ruins in the 19th and 20th centuries.

Only in the case of phases three and four can narrow time intervals be assigned with a high degree of probability, and this is based on the correlation of the results of the dating of the discovered archaeological finds with information contained in written sources. For phase three, the probable dates are the Hussite raid of 1429 [4], the moment of taking over the castle by King George of Podiebrady in 1463 [24], or events related to the activity of robber knights. Phase four can be linked to the activities of the Logau family in 1545–1587. The inhomogeneous layers associated with phase five were deposited over an even longer time; therefore, the result was the slow degradation of the building, which culminated in the collapse of the northern wing of the upper castle in 1789. A similar situation, but even harder to discern in detail, was registered in the case of phase six. Heterogeneous layers of construction debris with sand, humus, and a thickness reaching almost 2 m were assigned. The finds discovered in it, even in their lowest parts, could be associated with the PTTK shelter functioning then in this place [2].

As for the discoveries made, the most spectacular one was the layer of black supple humus with burns and numerous artifacts (Fig. 4) that was discovered in all the trenches on the zwinger (JS 5004, 6004 and 7005). The military equipment found in this layer, mainly the arrowheads of small arms (Fig. 8) seem to testify that a siege had taken place there. The layout of points discovered in situ suggests that the attack on the castle was carried out from the most accessible northwest terrain. The structure of this layer indicates that we are dealing with a post-battle fire site. In the 15th century, this layer accumulated between the northwest part of the perimeter wall of the upper castle and the parkan erected at its foot. Numerous fragments of charred shingles and nails discovered in the fire layer connect them, and show that in the 15th century at least some buildings of the upper castle were covered with shingles. In theory, such a cover probably had the defensive sidewalk (guard porch) on the crown of the perimeter wall.

The research still raises many questions that are difficult to answer. When was the 15th century siege fought exactly and who did they fight against? As a result of the siege, which part of the castle was least affected by the fire? What was the result of the fire? Had the castle been conquered, or did the besiegers leave empty-handed? Archaeological layers and finds indicate that this event took place in the 15th century, specifically in the 1st half. As Artur Boguszewicz noted [4, further literature here], this is an extremely poorly researched period in the history of Grodno Castle.

A clarification of the above can be obtained from both archival queries and further excavation research. The latter may provide a larger series of exact archaeological date stamps and subsequent coins. Further archaeological research on Grodno Castle could provide a number of answers to questions about the details of its history. The excavations at the upper castle should be aimed at verifying the beginnings of its function. Further research at the lower castle could provide more information on how this plateau was developed before the 16th century. Undertaking systematic archaeological research into the entire castle area would allow us to better understand the functioning of the economic base of the castle and the roles it has played over the centuries.

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References

Słowa kluczowe: zamki, późne średniowiecze, okres wczesnonowożytny, Śląsk, wojny husyckie, rycerze-rabusie