

Slipware from Tykocin Castle (Poland) from the 16th–18th Century

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The main goal of this article is to analyse post-medieval slipware found during archaeological excavations in Tykocin Castle and to describe its distinguishing features: decorative characteristics and forms. Further considerations are aimed at reconstructing the functions of the Tykocin slipware vessels in the castle household throughout the 16th to 18th centuries and attempting to determine their provenance. The analysis is preceded by the list of terminological problems pertaining to this pottery group in the Polish literature as well as elementary information on its production centres in Poland against the European background.

KEYWORDS: slipware, slip-decorated earthenware, lead-glazed redware, post-medieval pottery, semi-majolica, Tykocin Castle

INTRODUCTION

Pottery studies constitute an integral and constant aspect of archaeological research, since pottery is one of the most elementary archaeological sources, usually well-preserved and often found in large quantities, shedding light on everyday life in the past. Generally this holds true for the post-medieval period and the developments in pottery-making on the European continent that occurred throughout the 16th–18th centuries, which were predominantly manifested in the introduction of innovations unknown in the late Middle Ages: an extended assortment of forms and the differentiation of types of the produced vessels. This process mostly entailed the emergence and the gradual spread of luxury ceramics (such as majolica, faience, or porcelain) and more ordinary items (including glazed-ware, whiteware, or slipware) that complemented the “traditional” pottery (redware and greyware). These novelties also included personal and specialist utensils (such as plates, cups, kettles, or vases).

This diversity is also reflected in the assemblage obtained from the castle site in Tykocin, situated in Podlachia, north-eastern Poland. It comprises finds collected

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during archaeological excavations conducted there in the years 1961–1963 and 1999–2007 (for more information on the scope and results of these works, see Bis and Bis 2006; 2015a). Pottery clearly dominates the rich collection of artefacts discovered at that site, amounting to 65,871 pieces or 72% of the total number of artefacts. The majority are vessels of various types – 50,469 fragments, i.e., 76.6% of the ceramics and 55% of the whole assemblage from the site (see Bis 2015: 96–97, Table 2). Only a few of them – 137 fragments, merely 0.2% of total pottery – comprise sherds of the slipware discussed in this article (75 vessels in total). They are made of ferrous clays (redware), fired in an oxidising atmosphere, and decorated with painted ornaments of different complexity and techniques. For this purpose a slip (diluted clay) was used, creating an underlay for ornamentation and serving as a paint for the patterns. The decorated surface was covered with lead glaze. These vessels were used by the residents of Tykocin Castle in the modern era and after destruction were deposited at the site in cultural layers dated to the period between the second half of the 16th and second half of the 18th centuries.

The aim of this article is to draw attention to this small but distinctive pottery group and contribute to the Polish archaeological discourse on its production in what is contemporary Poland as well as the related terminological questions in the context of the European background. The main part of the text offers a characterisation of the finds from Tykocin Castle in regard to their morphology, function, and decoration, to the extent allowed by their state of preservation. These observations then serve as a basis for a discussion on the functions of these vessels in Tykocin Castle throughout the 16th–18th centuries. An attempt has also been made to determine their provenance.

TERMINOLOGY AND RECENT FINDS

Foreign literature uses several related terms connected to the pottery discussed here. In the English nomenclature, they are usually referred to as slip-decorated lead-glazed earthenware, redware with slip decoration, or, simply, as slipware, whereas the ornamentation itself is called slip trailing, slip-trailed decoration, or slipped decoration. German works tend to use *Malhornware* or *bleiglasierte Irdenware* (cf., Stephan 1987; Gaimster 2006). These terms are commonly accepted and used by foreign scholars in regard to this type of pottery. The above state of affairs, just as the whole development in research on these matters in Europe, is largely a consequence of the seminal study by Hans-Georg Stephan, published 34 years ago and monumental in its chronological-geographical scope (Stephan 1987; this work also lists older literature). Stephan's legacy has been continued (for more on the studies on slipware in Europe, as well as general remarks on subsequent publications and discoveries, see e.g., Stephan 1991; Gaimster 1991; 2009: 534–535).

Although in foreign publications these issues are settled, in Polish archaeological papers there is still a lack of consistency in the naming of the pottery examined here. Several terms are used,¹ often interchangeably. The most long-standing and commonly used and established among them are: semi-majolica (Polish: *półmajolika*; in studies over the past decade, e.g., Mackiewicz 2012: 152–154; Miazga *et al.*, 2012: 49; Garas and Karwowska 2013: 238–240; Poklewska-Kozielińska 2013: 113–117, tabl. 12–14; Kruppé and Milewska 2014: 86–87; Affelski and Trzeciecki 2016: 173–174; Pankiewicz and Rodak 2016: 351–352; Trzeciecki 2016: 41–42, 129–130; 2017: 171–183; Wojenka 2016: 232–240; Rodak 2017: 162–163; Włoszek 2017: 105–106; Paterczyk 2018: 82–87; Meyza 2019: 69; Niedźwiadek 2019: 249; Zamelska-Monczak 2020: 155) and pseudo-majolica (Polish: *pseudomajolika*; in more recent works, e.g., Garas and Trzciński 2010: 27–28; Oniszczyk 2013a: 26; Pawlata 2013: 136; Starski 2013: 167–170; 2015: 119; Dryja 2014: 132; Gajewska and Kruppé 2017: 127–129; Lis 2017: 347–350; Trąbska *et al.*, 2019).

Other names have been proposed by researchers, but are far less popular. These include: lead-glazed earthenware with underglaze decoration (Polish: *ceramika zdobiona podszkliwnie*; mostly in Meyza 1991; 1993; 2017a; also Marcinkowski 2009; 2019: 93–95), and engobed earthenware with underglaze decoration (*angobowana zdobiona podszkliwnie*, as in Pytlak 2013: 69–71), painted red ware (Polish: *ceglasta malowana*), white-washed and glazed redware (Polish: *ceglasta szkliwiona na angobie*), slipped earthenware (Polish: *naczynia ceglaste malowane na angobie*), (see Lechowicz 2012: 118–119; Dąbal 2015: 232–236; 2018: 316–317; Dąbal and Szczepanowska 2018: 181, 185; Wołyńska 2020: 110–113), as well as decorated with a piping bag (*zdobione różkiem*, see Mackiewicz 2012: 131), redware painted with a piping bag and glazed (Polish: *ceglaste malowane różkiem i szkliwione*, e.g., Majewski 2017:95), as well as red ware engraved, painted with a piping bag cone and glazed (Polish: *ceglaste szkliwione rytowane i malowane różkiem*, e.g., Kwiatkowski and Majewski 2016: 154, 181–183, Fig. 4–6; Majewski and Wojciechowska 2019: 79–82), or polychrome pottery (*ceramika polichromowana*, see Szwed 2004: 342–343). In some cases, the name mezzamajolica is also used (*mezzamajolika*, in newer works, e.g., Garas and Trzciński 2010: 27; Mackiewicz 2012: 152; Poklewska-Kozielińska 2013: 113; Pankiewicz and Rodak 2016: 351; Paterczyk 2018: 82).

The majority of these terms are imprecise, as they were arbitrarily chosen to refer to several groups of pottery differing in terms of manufacturing technique but sharing similar painted decorations under lead glaze (Meyza 1991: 118–119; 1997: 125–127; see also Marcinkowski 2009; 2011: 15–16). Although they are still subject to debate, some of these terms have already become established in the Polish literature and are used to

¹ Due to the short form of the article, my aim is only to indicate the main terms used in the Polish literature with regard to this type of pottery. I will not analyze here the origins of these concepts, nor discuss publications in which they were used.

generally identify this type of vessels. These took place even though the prefixes used, such as “pseudo-” or “semi-”, are value-laden and depreciate pottery called this way by comparing it to other types of presumably better quality – majolica or faïence – or suggesting that they are their imitations or forgeries. On the other hand, “lead-glazed earthenware with under glaze decoration” may just as well refer to vessels decorated this way but of a different type – the so-called Pomeranian faïence.

It seems that the most adequate term in the Polish language would be an expression reflecting two primary features of these artefacts, i.e., the raw material and ornamentation – Polish: *ceramika ceglasta angobowana szkliwiona* [lead-glazed redware with slip decoration]. In my opinion, it is worth considering using the simplest, common English term – slipware. Both of these definitions (slipware and *ceramika ceglasta angobowana szkliwiona*) are broad enough to include slip-decorated vessels, where the slip differs in terms of methods of application and consistency. These are earthenware vessels with slip of thicker consistencies, which could be trailed, poured, or squeezed, or of thinner consistencies, which could be applied with a brush, a rag, or by hand. A design could also be cut through the overlying slip, exposing the contrasting colour of the clay body beneath (sgraffito decoration; see MPRG 1998: chapter 12.5–12.6; Orton and Hughes 2013: 86–88). I use this extensive meaning as the definition of the group of vessels discussed.

The unfading scholarly interest in this pottery is a European trend (the newer foreign publications are Amato *et al.*, 2009; Funke and Leiber 2012; Gawronski 2012; Kröll 2012; Witte 2014; 2016; Demuth 2015; Bikić 2017; Gajić-Kvaščeva *et al.*, 2018; Blažková 2019; Giorgio 2019; Heege 2019a; 2019b; Matějková 2019; Ose 2019: 72–74, 117–119; the works list further literature). On the one hand, it is related to the ongoing development of historical archaeology and studies of post-medieval pottery, including the expanding knowledge of slipware. On the other, it reflects the considerable frequency of these artefacts and their spread across the continent throughout the 16th–18th centuries, as well as European developments in decorated pottery production inspired by the Renaissance.

As indicated by the above-mentioned examples, the last decade has seen an increase in the known source base related to this pottery in Poland as well as publications referring to it. Such vessels have been found in various regions at sites containing post-medieval archaeological material. The dating of the Polish finds falls into the period between the second half of the 16th century and the 18th century. They match the European manufacturing standards at that time, both in terms of ceramic forms and their decoration techniques.

PRODUCTION CENTRES

Some of the most important regions in Europe where slipware was manufactured were located in today's Germany, of which the best-known are Weserware and Werraware.

The period when these vessels were produced in larger quantity extended over several decades (1580–1620/1630 and 1568–1620, respectively) and ceased when the Thirty Years' War broke out. The basic assortment consisted of tableware supplemented with kitchenware. Weserware was manufactured between the rivers Weser and Leine, in Altenhagen, Brüninghausen, Dörpe, Höxter, and Völksen. The primary distinguishing features of these vessels were simple colour ornamentation, mostly geometric and floral motifs (including zigzag lines) on a bright overlay (thanks to the use of white slip), and flat bases. Werraware was manufactured in Hesse, in the following production centres: Eschwege, Grossalmerode, Hannoversch Münden, Heiligenstadt, Treffurt, Wanfried, and Witzenhausen. What distinguished these vessels was that many specimens had painted production dates and ornaments made predominantly in the sgraffito technique, usually bright figural motifs against a dark underlay (e.g., Stephan 1987: 85–110, 274–280; Gaimster 1988; 2006; Bartels 1999; Demuth 2001).

Both of the aforementioned groups were numerous and widely distributed (Stephan 1987: 85–110, 274–280; the work lists further literature). They also reached the coast of the Baltic Sea (including Poland), as evidenced by archaeological finds and their recent publications (e.g., Demuth 2001; 2015; Russow 2006; Niukkanen 2007; Dąbal 2013; Oniszczyk 2013a; 2013b; Russow and Haak 2018; Ose 2019; Linaa 2020). Weserware and Werraware seem to be foreign slipware the most often identified in Polish post-medieval ceramic assemblages (e.g., Szwed 2004: 343; Dąbal 2013; 2015: 232–233; Oniszczyk 2013b: 89–90, Nos 377–391; Kwiatkowski and Majewski 2016: 154).

Another significant continental region where slipware was manufactured was the Lower Rhineland, especially Coppengrave, Duingen, Duisburg, Hohenbuchen, and Wesel (e.g., Gaimster 1988; 2006). However, many other manufacturing sites in central and northern Europe have been identified (see Stephan 1987), for instance Lüneburg, Rostock, or Husum in northern Germany (e.g., Schäfer 2007; Kröll 2012; Witte 2014), Beauvais, Pas-de-Calais, Arras, or Douai in northern France (e.g., Gaimster 1991), Schüpbach in Switzerland (e.g., Heege 2019a: 96), centres in southern Denmark (e.g., Witte 2016), Stockholm in Sweden (e.g., Johansson 2007), as well as Beroun and Levín in Czechia (e.g., Blažková 2019; Matějková 2019).

In the territory of modern-day Poland, the considerable amounts of known slipware finds contrast with the scarcity of identified and published post-medieval pottery-making centres or at least potential production sites. According to my findings so far, there were at least about a dozen such sites, located in different parts of Poland (due to the limited size of this paper, they are only listed below). In this regard, the archaeological perspective remains clearly distinct from the findings made by ethnographers (cf., Fryś-Pietraszkowa 1970: 68–69, il. 259; this author included 59 *pótmajolika production* centres that operated in the post-medieval period and are inactive nowadays).

The production centre that initiated Polish studies of this type of pottery in Poland, and which remains the best-researched so far, is situated in Miechocin, nowadays

a suburb of Tarnobrzeg in Lesser Poland (current Podkarpackie Voivodeship; Szarek-Waszkowska 1967; Szetela 1969a; Szetela 1969b; Szetela-Zauchowa 1994; see also the leaflet by Handerek 2006). Excavation work at this site uncovered remains of 12 workshops, along with finished products and post-production waste. These operated in different periods between the late 16th century and the end of the 18th century, and the heyday of that production centre is dated to the first half of the 17th century. The goods manufactured there were divided into several groups according to their chronology and ornamentation.

Other potential production sites in the region were at Rzeszów, Łańcut, and Jarosław, based on slipware finds and historical records concerning pottery workshops functioning there in the 16th and 17th centuries. However, no material remains of workshops manufacturing slipware have been discovered so far. The collected potsherds represented an assortment similar to that from Miechocin, except for slight differences in decorative motifs and colour schemes (cf., Kotuła 1953; 1956; Supryn 1975; Czopek and Lubelczyk 1993: 25–27).

One more place where slipware was manufactured in the 16th–18th centuries may have been Lublin (currently in the Lublin Voivodeship) or its environs. The abundance of finds and their significant representation in pottery assemblages from different local sites (e.g., Niedźwiadek 2019: 249), especially in manor houses (often above 50%), seem to support the above assumption. Despite such a high frequency, no slipware-manufacturing workshops have been discovered so far (personal communication with Rafał Niedźwiadek, July 19 2021).

Nevertheless, excavations have provided undisputed physical evidence for slipware production in Cracow (currently in the Lesser Poland Voivodeship) in the second half of the 16th century (Dryja 2014: 131–132), as remains of a workshop were unearthed in the suburb of Garbary, in 11 Loretańska Street. These vessels were fired in kiln III, along with a wide repertoire of other products (stove tiles as well as ceramic details and building materials).

Another workshop that probably manufactured redware with slip-trailed decoration alongside stove tiles, was discovered in Greater Poland, in Garczary, a suburb of Śmigiel (Wyrwińska and Wyrwiński 2005). At this site, archaeologists recorded remains of two kilns that operated in the second half of the 17th century. Glazed redware vessels with slip decoration were deposited mostly around the kilns and in their backfills and were interpreted as unused specimens or production waste (Wyrwińska and Wyrwiński 2005: 304–305, 307, Fig. 8).

It is sometimes suggested in publications that a workshop or a complex of workshops manufacturing similar post-medieval pottery existed also on Wzgórze św. Wojciecha (St. Adalbert Hill) in Poznań (Greater Poland Voivodeship; e.g., Poklewska-Koziełł 2013: 117; Paterczyk 2018: 87). The workshop that was recorded at that site produced panel tiles, among other things, which were dated to about the middle of the 16th

century, as well as some unspecified vessels (Łaszkiewicz 1993). Until these finds are fully published, however, this information remains unconfirmed.

The slipware excavated in Brzeg, Silesia (current Opole Voivodeship), at a site located in 10–12 Dzierżonia Street, has been considered to be of local origin. These finds were semi-majolica plates with redware and cream-white bodies, dated to the late 16th and 17th centuries, and constituted only a small percentage of the ceramic finds. The operation of a dynamic post-medieval pottery production centre in the town is attested by other archaeological sources and written records (Rodak 2017: 149–166).

Vessels of this type were also manufactured in Mazovia, in Warsaw, in one of the two pottery kilns (upper one, marked as no. 1) located within the former moat of the Old Town. This facility was interpreted as the workshop of Master Jan Rosołowicz, active in the late 17th century (Świechowska and Dukwicz 1955: 154–157, tab. 15; see also Meyza 2017b: 189–190). Its production focused on redware vessels, stove tiles and clay tobacco pipe bowls (Polish: *lulki*). In a recent verification of the excavation results, the dating of the finds was changed to the first half of the 18th century (Meyza 2017b: 196).

Two more slipware production sites were found in the Zachodniopomorskie Voivodeship. Such manufacturing activity in Myślibórz (Soldin) is evidenced by a pottery kiln preserved with its entire load and numerous pits filled with potsherds and fragmented stove tiles (Kałagate and Kościukiewicz 2004; Szymczyk 2011; Majewski 2019: 208), located near the town walls, behind the Pyrzycka Gate. The workshop functioned between the late 16th and early 18th centuries. The vessels found there stand out through their rich decoration (including the use of the chattering technique) and diversity of forms.

Remains of two presumed pottery workshops that operated after the late 16th century were discovered in Recz (Reetz/Neumark), in the housing blocks adjoining the town walls. Admittedly, no traces of manufacturing facilities have been found there, but the local production is evidenced by pottery wasters – potsherds and fragmented stove tiles, as well as unfinished and defective products (Majewski 2010; 2016: 81–84; 2019: 208–209).

Based on the above-mentioned examples, we may assume that the slipware characterised by its average quality and schematic decorative motifs may have been manufactured in many other pottery production centres and workshops as a part of a wider range of pottery, along with plain earthenware.

MATERIALS AND METHODS

The vessels discussed in this study were discovered in Tykocin Castle. This is a fortified structure situated opposite the town of Tykocin, on an elevation in the flood plain of the Narew River. It existed in its elementary form – a quadrangular brick-built

building – between the third quarter of the 16th century and the second half of the 18th century. The castle, together with bastion-type fortifications, was built on the orders of King Sigismund II Augustus.² Probably before 1630, when Krzysztof Wiesiołowski served as the castle's *starost*, the building and its interiors were modernised, with the surrounding fortifications transformed into a large bastion-type stronghold. A siege in 1657, during the Polish-Swedish war, brought severe damage to two of the four wings of the castle. However, the remaining part of the complex was still in use, at least for the next several decades. The castle belonged to the king until 1661 and afterwards was taken over by private owners: Hetman Stephan Czarniecki followed by the Branicki family of the “Gryf” coat of arms (to 1771). The fate of the building was sealed when a fire consumed it in 1734, along with the furnishings. After this disastrous event, no further attempts at reconstruction were made and finally (in the late 1760s) what remained of the castle was dismantled. Thus, its regular functioning was decisively terminated. Throughout the 19th and early 20th centuries, the relics of the building continued to deteriorate (cf., Bis and Bis 2006; 2015b).

The functions of the building changed throughout the two centuries of its existence depending on its proprietary situation and geo-political conditions. Since the beginning, it was meant to act as an important defensive point in this part of the Polish-Lithuanian Commonwealth, a garrison, and an arsenal. In addition, it safeguarded the private belongings of the last of the dynasty of Jagiellons (until 1573). Even at the beginning of the 18th century, it was still an important strategic point occupied by various armies during the military conflicts taking place in the Podlachia region since the mid-17th century. It became the seat of the Tykocin *starosts* (after 1572) and burgraves (castle administrators), a workplace for its numerous staff (including craftsmen of various trades and local villagers tasked with different services), and a place for judicial activities. The complex was also important for the local economy, as it comprised a building for economic functions, a granary, a brewery, an inn, a coach house, stables, and ponds. The castle was visited by several Polish elective monarchs and their courts: Stephen Báthory, Sigismund III Vasa, Ladislaus IV Vasa, Augustus II the Strong, Stanislaus I Leszczyński. It also served as a temporary residence for its owners – the Branicki family – and hosted important national events as well as local gatherings. In the course of the two centuries of its functioning (from the 1550s to the end of the 1760s), the number of people residing and eating at the castle fluctuated and is currently difficult to determine with precision. The same is true for their social or material standing and the related differences in consumption patterns and demands (cf., Bis forthcoming).

² Here, I ignore the earlier stage – from the late 15th to the early 16th century – when the castle functioned as a wooden structure belonging to the Lithuanian family of the Gasztolds. No slipware was dated to this period.

The 1960s, when the castle was to be transformed into a permanent ruin, saw the first archaeological excavations and architectural studies at the site, conducted by Jerzy Kruppé. Towards the 1990s, further archaeological exploration was undertaken and continued until 2007 to enable planned reconstruction of the castle. The latter earthenworks were managed by Magdalena Bis and Wojciech Bis (for more details, e.g., about discoveries, stratigraphy, objects, and other finds, see Bis and Bis 2006; Bis 2015). This research encompassed the remains of castle buildings – their interior and the castle’s direct vicinity – up to the line of the bastion fortifications. They focused on the western, south-western, and north-western parts of the complex (cf., Bis 2015: 80, Fig. 30).

All finds discussed in this paper were discovered during the above-mentioned excavations (in total, 137 slipware sherds coming from 75 vessels). Most finds (44 vessels, i.e., almost 59%) were found during the excavations carried out in the years 2001–2007, whereas the rest (31 specimens, i.e., 41% of the total vessels) in the course of work conducted between 1961 and 1963 (Fig. 1). It is noteworthy, because the earlier finds are predominantly loose, as they have been obtained from architectural trial trenches



Fig. 1. Outline of the foundations of Tykocin Castle with location of trenches (orange and blue colours) and watching briefs (purple colour) from the years 1961–1963 and 2001–2007. The trenches with the biggest amount of slipware vessels are shown in red. Prepared by W. Bis.

or regular excavations but with stratigraphic contexts that are currently difficult to reconstruct. Some of the vessels from the methodical excavations at the beginning of the 21st century were obtained from recently-mixed layers – transposed within the complex or forming backfills of the earlier trenches. In these cases (41% of the slipware in total), it was assumed that they came from the time of the brick-built castle, i.e., the second half of the 16th to the second half of the 18th century. Therefore, they have no bearing for the chronological diversity of the assemblage. The majority of the remaining, and well-dated, artefacts come from the cultural layers formed in the 17th and 18th century.

Their frequency in different parts of the complex was uneven. Slightly more vessels (16) were discovered near the northern bastille (trenches nos. VII, 20 and 21). It was an area where broken items or elements of castle equipment (e.g., stove-tiles) were discarded during cleaning works in different periods, e.g., after the Swedish Deluge (1655–1660).

The drawback of many of the discussed finds is their poor state of preservation – heavy fragmentation, the small size of the sherds, and surfaces damaged due to post-depositional factors. In effect, assessing their morphology and differences in particular elements is problematic, just as is inferring their decoration, including the types of depictions, their distribution and layout, and connection to the vessel tectonics. Only three vessels were completely or largely reconstructed: one plate and two bowls. The majority of the finds are parts of rims (31), bases (19), bodies (24), and a single handle.

They represent two main categories of vessel forms – closed wares and open wares (cf., MPRG 1998: chapter 1.3.3). They were: plates, bowls, pots, mugs, jugs, and a lid (Table 1).

Table 1. Types of slipware vessels from Tykocin Castle, the 16th–18th c.

Slipware				
Vessel form	Sherd count (SC)	%	Minimum number of vessels (MNV)	%
plate	51	37.2	29	38.7
bowl	52	37.9	21	28
pot	16	11.7	12	16
mug	10	7.4	6	8
jug	7	5.1	6	8
lid	1	0.7	1	1.3
Total	137	100	75	100

The open wares prevail in the assemblage – plates (29 specimens, 39% of all the vessels) and bowls (21 specimens, 28% of the total). Other items, less frequently noted, belong to the group of closed wares. The mugs and jugs survived in the worst condition; they were found as fragmented bodies, which complicates their stylistic-morphological characteristic. The surfaces of many of the discussed vessels (57%) are discoloured and damaged, with the covering glaze often chipped (47%). Hence, the current appearance of these artefacts differs significantly from the original.

In order to analyse the above-described pottery assemblage, I followed the main guidelines of the British Medieval Research Pottery Group for standard procedures related to medieval pottery (cf., MPRG 2016), also used for post-medieval pottery assemblages (e.g., Gaimster 2006). The quantification method was based on the identification of the minimum number of vessels (MNV), which determines the smallest number of vessels that could have produced the sherds found in the ground. The method involves examining all the sherds objectively and placing similar ones, which may have originated from the same vessel, together (Gaimster 2006: 48). All examinations were made by macroscopic method. The slipware was defined by a combination of fabric (colour, texture, surface treatment, and glaze), form, and decorative characteristics (Gaimster 2006: 52), as well as vessel size, method of manufacture, evidence of use, and state of preservation (MPRG 2016: 20–32). I used the glossary of forms and types after the MPRG 1998 (see also Bauer *et al.*, 1986; Orton and Hughes 2013). All the investigated morphological and technological features were noted and entered onto a matching questionnaire (in a database system). The information registered there serves as the foundation for the further conclusions presented below. Selected potsherds were drawn and photographed and prepared for the figures included in the text.

RESULTS – CHARACTERISTIC OF SLIPWARE

The slipware found at the castle site in Tykocin was of decent quality. The vessels were manufactured from the most common raw materials – ferrous clays – which were adequately prepared. The ceramic mass usually contained sand in the form of glassy grains of quartz (for 60% of the vessels), characterised by coarse and medium size of grain inclusions (0.5–1 mm and 0.25–0.5 mm; cf., Orton and Hughes 2013: 280–282). The ceramic mass of bowls typically contained more coarse-grained inclusions (for 52% of them), usually due to utilitarian purposes. Single glistening flakes of white mica were also noticed.

The analysed pottery was predominantly (70 vessels, i.e., 93%) thrown on a potter's wheel. Five slipware vessels were hand-made (i.e., 7% of the total). The firing was conducted in an oxidising atmosphere and usually well-managed, as evidenced by the homogeneous colour of the core (the section through the wall) in many of the vessels (51, i.e., 68%). However, this process occurred sub-optimally in a significant

number of pots and bowls (about 40% for each category), which resulted in bi- or trichromatic cores. Upon firing, the vessels' bodies turned different shades of red – from pink to light brown, with reddish-yellow (5YR6/6–7.5YR6/6 according to Munsell) and yellowish-red (5YR4/6–5/6) being the most common (44 earthenware, i.e., 59%), followed by light-red (2.5YR6/6–7/6) or red (2.5YR4/6–5/8), (Munsell 2000).

The walls of these vessels are usually 3 to 7 millimetres thick. The thickness is greater in the parts of the bodies closer to the bases, especially in bowls, and the smallest in the middle parts of bodies in pots and jugs. From the outside, the walls were carefully smoothed, so that no irregularities can be felt. The cores are usually compact and hard (cf., Orton and Hughes 2013: 277). The glaze covering the surfaces of all the vessels is made of lead oxide, colourless, and transparent. It forms a thin layer that got tarnished or chipped in about a half of the specimens, due to post-depositional conditions (Figs 2:9–11; 3:1–2, 6). Apart from its practical purpose, i.e., increasing the impermeability of the vessels, the glaze was also a decoration – it emphasised the colour of the body and its ornamentation and provided the pottery with gloss. The glazing was applied to the already slip-covered and decorated outer walls of pots, jugs, mugs, and lids, as well as the inner walls of plates and bowls. Plates and bowls were also glazed (only partially and not always) on the other, undecorated side, while pots, jugs, and mugs were usually glazed on both sides.

What distinguishes the discussed artefacts is their decoration – colours and patterns. Unfortunately, due to their heavy fragmentation, not much can be said about the arrangement of the ornament or its correlation to the shape of the vessel. In most cases, only small parts of the ornaments are visible. Their specific primary feature is the use of the slip, which is obtained through suspension of fine clay in water (this is present on 60 earthenware, i.e., 80%). In 75% of the discussed vessels, their surfaces had been covered with white slip. Upon firing, such a layer put on clay bodies and under colourless glaze resulted in a bright, beige or yellowish overlay (Figs 2–5). In the case of the remaining 25% of the earthenware, a brown or green slip was used, thus creating a dark cover, strengthening the natural colour of the raw material (Fig. 6).

Such prepared surfaces were then ornamented. Much less frequently (in 15 vessels, i.e., 20% of the total), the decoration was applied directly on the body. In more than 20% of the cases (i.e., 17), the state of preservation precluded identification of decorative motifs. The vast majority (62 vessels, i.e., 83%) were embellished with colourful painted patterns. Their assortment consists of several schematic groups:

- 1) floral, the most common (27 items, i.e., 36%) – in the form of stylised leaves, twigs, flowers, buds, and osiers arranged into, as it seems, diverse combinations (Figs 2:1–3, 10–13; 3:3–4, 9–10; 6:4);
- 2) geometrical, less common (12 items, i.e., 16%) – mostly straight or wavy lines in various arrangements (horizontal, vertical, and diagonal), strips, dots, and circles (Figs 2:5–9; 3:5, 7–8; 6:1–3, 5–8);

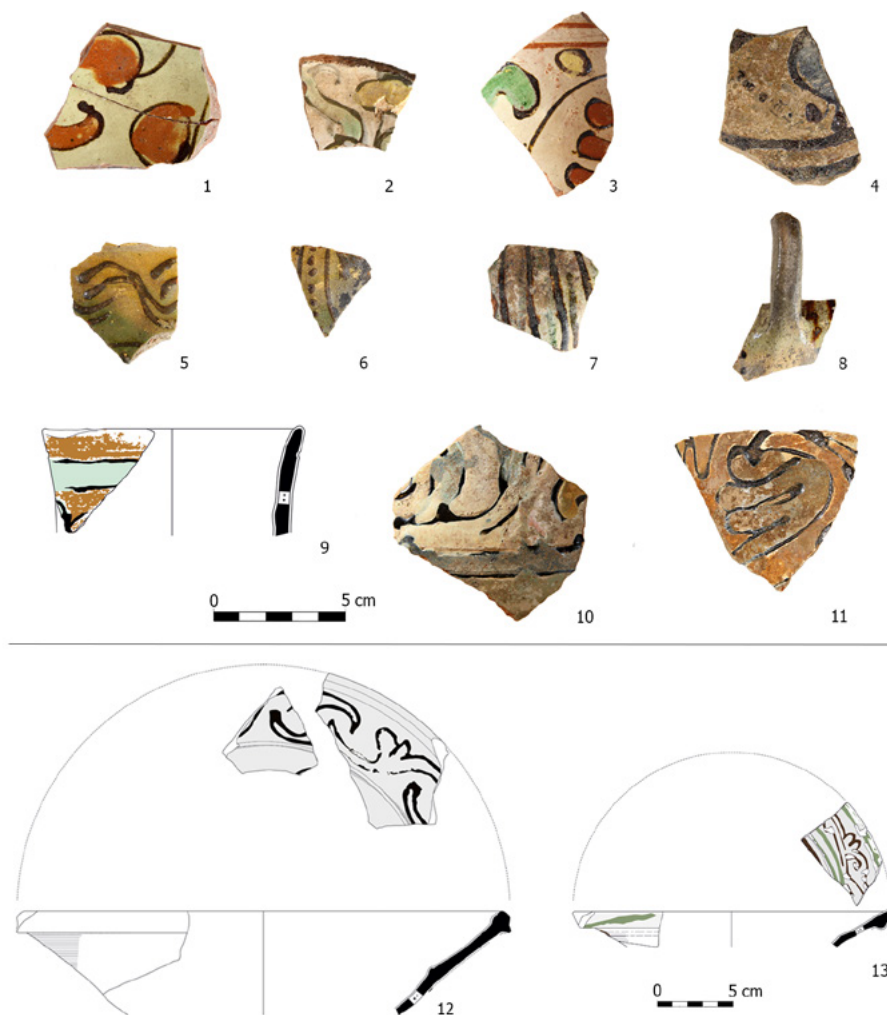


Fig. 2. Slipware from Tykocin Castle with bright slip overlay, brown outline, and precisely painted ornaments, 17th century: 1–3, 10–13 – floral motifs; 4 – zoomorphic (?) motif; 5–9 – geometric motifs. Drawing by M. Wagner, photo and computer graphics by W. Bis.

- 3) presumably zoomorphic (1 item) – since the ornament is only partly visible, it remains unclear whether it is a schematic depiction of a sitting bird (its torso and legs) or an element of a different motif (Fig. 2:4);

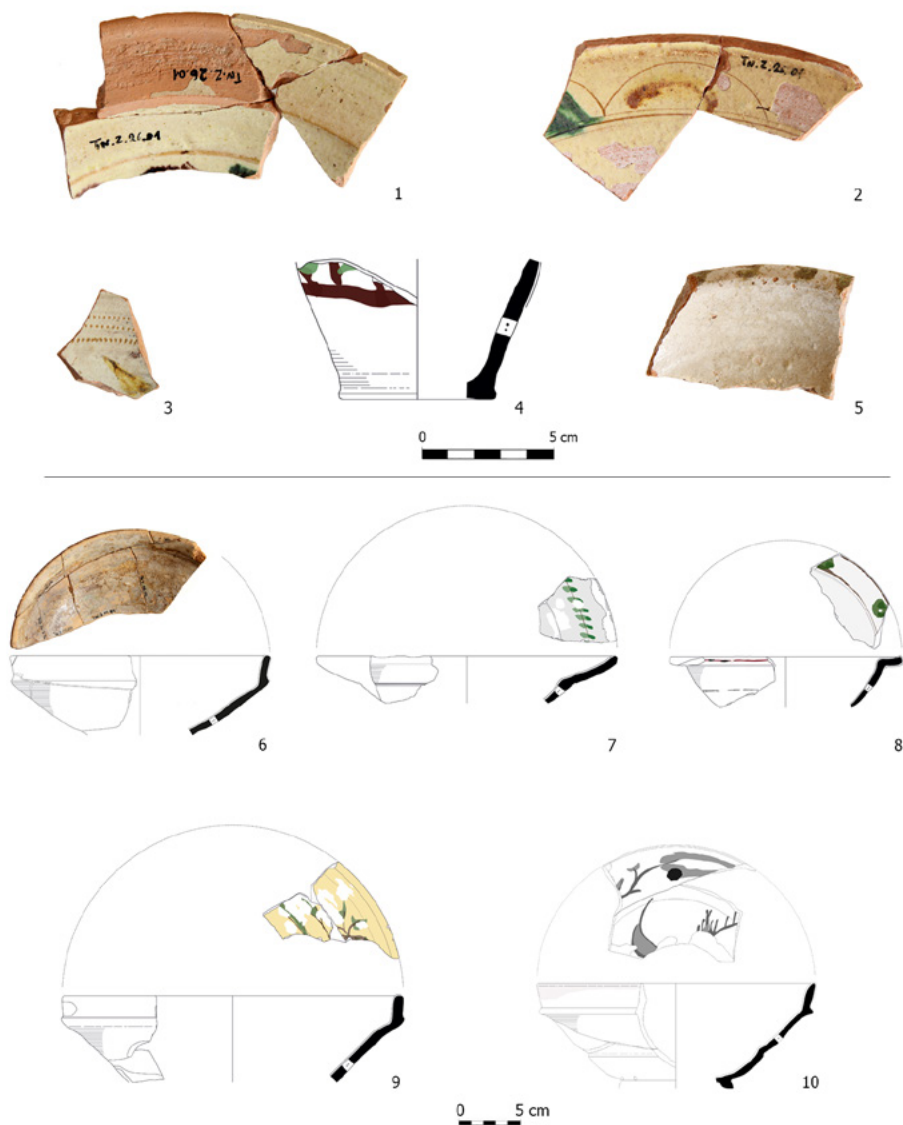


Fig. 3. Slipware from Tykocin Castle with bright slip overlay, simplified painted ornaments, and decorated with other techniques, the second half of the 17th–18th centuries: 1–5, 7–10 – painted ornament; 2 – sgraffito ornament; 3, 6 – chattered ornament. Drawing by M. Wagner, photo and computer graphics by W. Bis.



Fig. 4. Slipware from Tykocin Castle with bright (1-4, 6-7) or dark (5) slip overlay, simplified painted ornament, and decorated with other techniques, the second half of the 17th–18th centuries: 1–2, 5 – spots; 3–4 – sgraffito ornament; 6–7 – marbled decoration. Drawing by M. Wagner, photo and computer graphics by W. Bis.

- 4) colour spots (11 items, i.e., 14.7%) – usually monochrome (green or brown), sometimes bichrome (brown-green), occasionally with streaks scattered irregularly across the surface (Figs 4:1–2; 5);
- 5) marbled decoration (2 items, i.e., 2.6%), rare. This ornament was created through marbling – partial mixing of two slip colours on the surface of a vessel (MPRG 1998: chapter 13.2). The marbled decoration is bichrome (white and green or white and brown; Fig. 4:6–7).

The analysed potsherds lacked other original painted motifs, such as human figures, genre scenes, symbols, dates, or sentences.

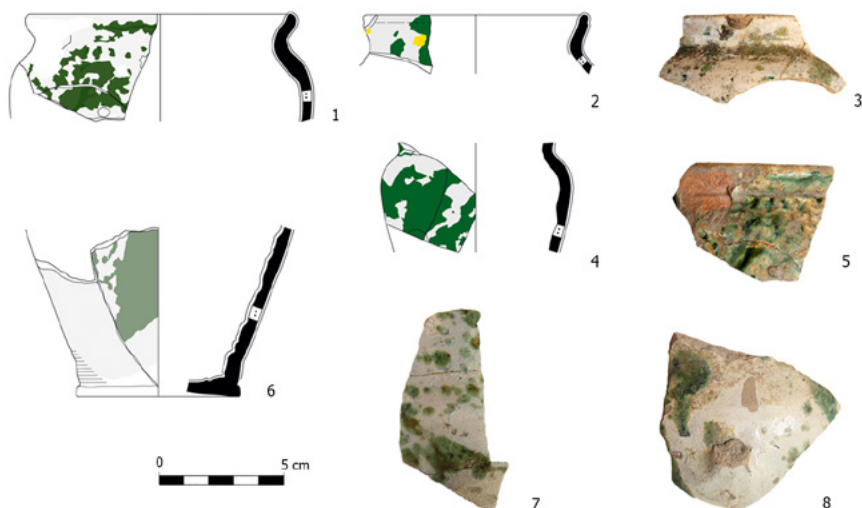


Fig. 5. Slipware from Tykocin Castle with bright slip overlay and simplified painted ornament, the second half of the 17th–18th centuries: 1–8 – spots. Drawing by M. Wagner, photo and computer graphics by W. Bis.

The employed colour scheme is limited to several hues: green (a grass-like colour being the most common), brown, white, and yellow, with occasionally occurring turquoise, bluish, or reddish. In 20% of the vessels, the patterns are outlined in a colour contrasting with the underlayer, which adds to the regularity and sharpness of the motifs. The outline is almost always brown (15 items), with a single white example.

On several vessels, the ornament was applied with different techniques. In three cases (4%), it was sgraffito where a part of the slip was removed with a sharp tool to reveal the colour of the underlying layer or that of the clay itself (Orton and Hughes 2013: 88; MPRG 1998: chapter 12.6) creating a pattern of thin wavy and semi-circular lines (Figs 3:2; 4:3–4). However, five other items (7%) were decorated with rows (bands) of dots impressed with a chattering tool or a roulette. These dots are dark since their colour matches that of the redware body uncovered below the layer of bright slip (Fig. 3:3, 6). This technique is known as chattering or hemring, in German: *Kerbstichdekor*, *Springfederdekor*, *Hemrad dekor* (see Heege 2019a: 95–96; 2019b: 84).

Only on three of the analysed vessels was the ornament created with different techniques combined – painted ornament with sgraffito (Fig. 3:2) and painted ornament with chattering (Fig. 3:3).

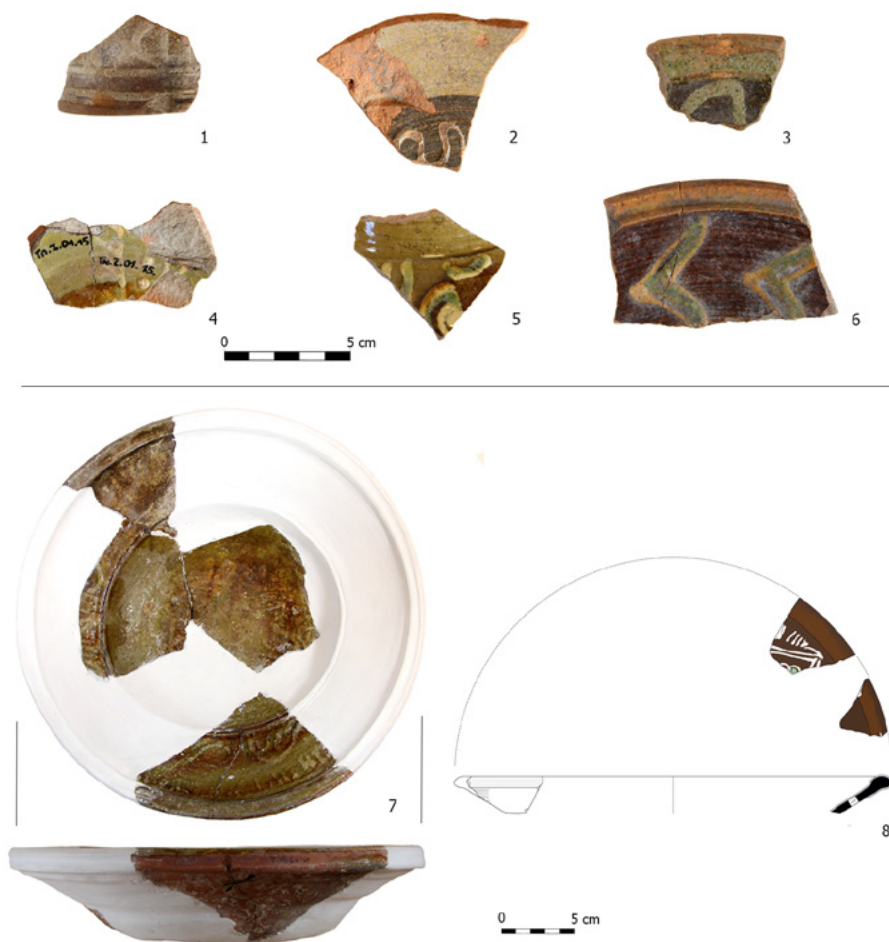


Fig. 6. Slipware from Tykocin Castle with dark slip overlay or without slip cover, with precise and simplified painted ornament, the 17th–18th centuries: 1–3, 5–8 – geometric motifs; 4, 8 – floral motifs. Drawing by M. Wagner, photo and computer graphics by W. Bis.

The most common category in the Tykocin slipware assemblage are plates (see Table 1), which represent shallow dishes (e.g., Figs 2:13; 3:7; 6:7–8). As far as the fragmentation of the vessels allowed, it could be determined that in most cases (6 specimens) their shoulder and body were of similar height, with both parts separated with a gentle cut; alternatively, in rare cases, the shoulder was shorter than the body or the other way round (cf., MPRG 1998: chapter 5.4, forms a–c). Their edges (n=12)

are usually everted from the vessel wall (5) or, less commonly, formed differently – inturned (3), clubbed (2), or flat (2; cf., MPRG 1998: chapter 11.7.1). Typically, the profile of the rim is collared (7), in some cases thickened (3) or simple (2). The diameters of the edges of the rims range from 20 to 31 cm. Recurring sizes are 28 (in 4 specimens), 26, and 30 cm. The bases of the plates (n=8) are 8 to 12 cm in diameter, with three specimens measuring 11 cm. It is equally common for them to either have a footring or not; but when they do, the footrings are flat and their surfaces are smoothed. The only reconstructed specimen is 5.5 cm high. Decorations are applied from the inside, both on the bodies and the rims of the vessels.

The bowls come in diverse sizes, from small through medium to large, although the bigger ones are the most common (e.g., Figs 2:12; 3:6, 8–10; 4:1). The prevalence of large bowls is evidenced by their rim diameters ranging from 10 to 28 cm and divided into three size categories: 10–11.4 cm (3 specimens); 16–20 cm (3); and 21–28 cm (7). In regard to the profile of their walls, they represent three types: carinated, flared, and rounded bowls (MPRG 1998: chapter 5.1.1–5.1.6). Their preserved and measurable bases (n=4) range between 10 and 12 cm in diameter. In two cases, it was possible to determine the height of the vessels – 8 and 10 cm. In terms of depth, they were probably shallow and medium vessels (MPRG 1998: chapter 5.1). As shown by the investigated sherds (n=13), the angle of the rim is usually everted (8), sometimes flat (3) or upright (2), whereas the rim forms include: rounded (5), simple (4), thickened (3), and collared (1). The profile of the rim edge is usually rounded (7) or bevelled (6). The shape of the base in profile is concave or flat, with the majority of the bases smoothed from the outside. The ornament is found on the inside of the bodies and the bases or flattened mouths.

Since the plates and bowls are open wares, their inner part forms the largest and most exposed surface suitable for presenting diversely arranged decorative elements. This is attested even by the fragmentarily preserved slipware vessels discussed in this paper. It also reveals this pottery's important decorative purpose.

The pots in the discussed group of vessels are rather small and morphologically close to rounded mugs, i.e., mugs with a rounded body profile below a deep neck and with vertical loop handle(s) (MPRG 1998: chapter 6.3.5); such handles were found on three of them. It may be assumed that these pots were used as individual drinking vessels (Fig. 5:1-4, 6, 8). The diameters of their mouths (n=5) measure 8, 10, and 12 cm (the last measurement obtained from a single specimen), whereas the bases (n=2) – 6 and 7 cm. The shape of the rim is everted (3 specimens) or inturned (2) in relation to the vessel wall, whereas the profile of the rim edge is rounded or bevelled. Only one base is fitted with a foot. Rod handles are oval in section, measuring 1.2 and 1.4 cm in width. The surface of the pots was covered exclusively in white slip, on which was applied decoration composed mostly of monochrome (green) spots, sometimes with streaks, chaotically scattered across rims and bodies. The decoration of these pots shows the most consistency and the least diversity compared to the other vessels.

Mugs, i.e., basic drinking vessels, are preserved as bodies (5) and a base (1; Figs 2:3; 5:7; 6:1). The base has the diameter of 8 cm and has a foot. The shape of the bodies suggests that they derive from barrel-shaped, conical, or cylindrical mugs. Presumably, they had different capacities. The majority of the sherds are covered with a bright slip with various patterns (5).

Information about the jugs is limited, due to their fragmentary state of preservation. Mostly parts of bodies (5 specimens) were recovered, along with a single fragment of a rim (Fig. 2:9–11). These small sherds reveal little about the shapes of the whole jugs. However, it may be supposed that they were relatively pot-bellied vessels – pear-shaped or shouldered jugs (MPRG 1998: chapter 3.1). The rim, 12 cm in diameter, is upright (in angle), simple (in form), and internally bevelled (in rim profile). The ornament was applied on a bright or coloured underlayer.

The only lid from the assemblage is a fragmentarily preserved specimen with a shallow domed profile and a central integral knob (Fig. 4:5). The knob is wedge-shaped in elevation (MPRG 1998: chapter 7.1.4c) and measures 1.5 cm in diameter. In this case, the ornament, presumably with floral motifs, was applied on a background layer of dark slip.

PROVENANCE, CHRONOLOGY, AND FUNCTION OF SLIPWARE VESSELS

The slipware used at the castle in Tykocin probably comes from at least several manufacturing centres operating in the post-medieval period. In this context, it is crucial to determine whether they were local products or imports. Answering this question requires indicating those features that would enable identification of particular manufacturing regions and more precise dating of the Tykocin finds.

In terms of technological sophistication, the slipware from the whole discussed period, i.e., from the second half of the 16th century to the second half of the 18th century, is relatively consistent. The basic differences in quality are best visible in ornamentation, despite it being only partially preserved. Two quality standards could be distinguished: carefully and precisely executed, presumably by proficient craftsmen not without a spark of creativity; and more schematic, merely referencing certain stylistic tendencies seen in slipware production, manufactured in a sparing and simplified way by pottery-makers with average skills.

The first group would include most of the specimens with bright background, some vessels with the ornament painted against a dark underlay but outlined with a contour, and specimens with marbled decoration or ornamented with sgraffito and chattering techniques.

These fragments predominantly show features characteristic for the output of the Miechocin workshops from the 17th century in terms of the precision of the paintings,

execution of their elements, composition, and colour scheme. The above applies to vessels decorated with different patterns (Figs 2:1–4, 9–13; 4:6–7; 5; 6:6, 8): floral and geometric on bright background (e.g., Szetela 1969a: 8, Figs 18; 11, Fig. 31; 13, Fig. 45; 15, Fig. 57; 30–31, Fig. 123–125; Szetela 1969b: 58, Fig. 57–59) and dark underlay (Szetela 1969a: 11, Fig. 37; 24, Fig. 93; 26, Fig. 102; Szetela 1969b: 92, Fig. 41), with a bird(?) motif (Szetela 1969a: 22, Fig. 83), and with marbled decoration (Szetela 1969a: 21, Fig. 80; 1969b: 91, Fig. 38). Analogous products, especially related to the peak of the Miechocin production, are discovered in many places across Poland, e.g., in Elbląg (Marcinkowski 2009; 2019), Gdańsk (e.g., Oniszczyk 2013b: 95, nr 439–440, 442–443; Dąbal and Szczepanowska 2018: 181–182, Fig. 14:1, 4), Janowiec (Gajewska and Kruppé 2017: 141, tabl. 8:1–8), Gdańsk-Wisłoujście (Dąbal 2015), Płock (Trzeciecki 2016), Poznań (e.g., Poklewska-Koziełł 2013; Paterczyk 2018), Puck (Milewska and Kruppé 2014; Starski 2015), Stargard (e.g., Kwiatkowski and Majewski 2016), and Warsaw (Mierosławski 1979; Meyza 1991; 1993; 1996; 2017a; Starski 2013).

The provenance of the specimens decorated with the sgraffito technique has not been determined (Figs 3:2; 4:3–4). The reason for that is their poor state of preservation which prevents identification. It is possible that they are of local production, like similarly decorated finds e.g., from Skaryszewy (unpublished materials, oral communication from Dr Michał Starski).

The vessels with the chattered decoration (Fig. 3:3, 6) probably come from workshops located in Mecklenburg-Vorpommern/western Poland or Sweden (cf., Heege 2019a; 2019b) since specimens from Tykocin find closest parallels in similarly decorated vessels from Myślubórz, dated to the late 16th and early 17th centuries, and Giessen (Heege 2019a: 100–101, Fig. 8; 2019b: 89, Abb. 10), as well as those discovered in the Carslbürg Castle near Bremerhaven (Heege 2019a: 103, Fig. 15; 2019b: 91, Abb. 17) and Malmö (Heege 2019a: 107–108, Fig. 23). Analogous fragments were obtained, for instance, in Poznań (Poklewska-Koziełł 2013: tabl. 13: 20), Puck (Starski 2015: 117, ryc. 113:6), Siedlęcín (Wojenka 2016: 235, ryc. 2:9), and Stargard (Kwiatkowski and Majewski 2016: 182, ryc. 5:60).

The second group, in turn, would include vessels ornamented with colour spots, painted decoration applied directly on the body, and that applied on a dark underlay but without an outline. These also happen to be the youngest finds within the assemblage.

This group of finds may be well represented by two bowls and a plate. The bowls have redware bodies decorated only with strips of white slip covered with irregular green and brown spots (Fig. 4:1–2). The remaining part of their inner surfaces is undecorated and covered with transparent glaze. Their provenance is difficult to determine; perhaps they were imports. They may be dated to the period between the late 17th century and the second half of the 18th century. A similar specimen was found, for example, in Amsterdam, dated to the years 1700–1850, and originating from the Lower Rhineland (Gawronski 2012: 277, no. 995).

The plate is an unfinished product (Fig. 6:7). A part of its body was covered with brown slip, but the layer melted and blurred. On top of it, a white slip was applied to paint a jagged geometric pattern. The find came from a layer dated to between the 17th century and the second half of the 18th century. Such subpar specimens may have originated from local Podlachian pottery workshops, perhaps operating outside the guilds. I was unable to find any analogies for it in the published works. Potters were active in Tykocin itself and other towns of the region in the post-medieval period, as attested by written records, but there is no information whether slipware was manufactured there at the time (cf., Maroszek 1976).

On the other hand, vessels ornamented with loosely scattered colour (green) spots against an overlay of white slip (Fig. 5) were produced, for example, in the Miechocin workshop in the 18th century (Szetela 1969b: 100, 103, Fig. 69). Such artefacts are known, for instance, from Warsaw (e.g., Meyza 1996: 58–59, no. 32; 80–81, no. 44; 82–83, nos. 48–50), Gdańsk, where they are considered imports from Miechocin (Oniszczyk 2013b: 427, 438), and Prague from the 17th and 18th centuries. In the last case, they were supposedly products from the Czech centres in Beroun or Levín (Matějková 2019: 136–137, figs 6–7). The finds from Tykocin Castle are stylistically and chronologically consistent with the aforementioned specimens. They may be dated to the first half of the 17th (?) century and between the mid-17th century and the second half of the 18th century. However, it is difficult to define where exactly they were manufactured. They are a testimony to pottery trade on, at least, interregional level.

The attribution of the vessels preserved as small fragments with non-characteristic ornamentation remains unknown (e.g., Figs 2:5–8; 3:4–5, 7–8; 6:2–5). Hence, the route which brought these items to Tykocin Castle cannot be reliably reconstructed. Some of the fragments lacking distinguishing features but of otherwise high quality are likely to have been imported from Western Europe.

How did they end up in the castle household? Polish goods were probably bought at local markets and fairs or delivered as a part of the tributes due to the castle. However, there are no written records explicitly confirming such a practice. On the other hand, in the case of the foreign vessels, there are many potential ways of reaching to the fortress. They were purchased (just as many other imported goods) predominantly in the capital (Warsaw) or in the Baltic ports (Gdańsk and Königsberg). Alternatively, they could have been ordered directly from foreign workshops, as evidenced by the 18th-century written accounts about pottery bought for Jan Klemens Branicki (cf., Bis forthcoming).

An equally important question is the way in which slipware was used. Its aesthetic features and the morphology of the vessels would undoubtedly make it a suitable table ware for serving dishes, eating, and drinking. For the same reason, they could have been used as interior decoration, especially that some vessels were prepared specifically for this purpose (e.g., a bowl with a perforated foot for hanging it as a decorative dish).

Their technical parameters combined with the decorative potential suggest that their quality surpassed that of the cheapest and most common kitchen ware – brownware, greyware, and redware. The same is true for the less numerous white ware, of slightly higher quality and also glazed, which would be put on the table and serve secondary purposes in the kitchen and larder. As indicated by the analysis of ceramic finds from Tykocin Castle, the quality and status of the slipware match those of the common vessels of the so-called Pomeranian faïence but are significantly below the quality of other faïences – imported or produced in Polish manufactories – as well as majolica, stoneware, and porcelain – more expensive and rarely recorded in archaeological layers. The slipware was probably used by officials, craftsmen, administrators, etc. – a wide group of consumers of average means – who would have resided in the building.

It is assumed that the demand for this kind of pottery in European countries was a result of the growing requirement for more sophisticated goods, serving as ceramic substitutes for metal- and glassware. This process was fuelled especially by the aspirations of the lower classes to imitate the lifestyle of the aristocracy. Other factors contributing to it may have been an inflow of imported goods and cosmopolitanism (cf., Cumberpatch 2003; Gaimster 2006). The local slipware production was a response of the domestic workshops to the new styles and solutions developed by western European workshops and renowned Polish manufactories. As demonstrated by the analysed vessels – probably made in Podlachia region, with mixed results.

CONCLUSIONS

The slipware obtained from Tykocin Castle, despite the limitations caused by its fragmentary preservation and damaged vessel surfaces, has prompted interesting observations. The assemblage included specimens representing the most popular morphological-stylistic trends and decorative techniques and motifs used in post-medieval pottery from different manufacturing centres. It seems likely that it originated predominantly from Polish workshops, including the renowned Miechocin or the Western-Pomeranian Myślibórz, as well as undetermined foreign production centres. It also contains products of other local workshops, presumably from Podlachia region, which delivered poor imitations of the superior slipware. The majority of the Tykocin finds is dated to the 17th and 18th centuries.

They are an example of, and a testimony to, one of the innovative trends in the pottery-making of that period. On the other hand, they also illustrate an important process taking place within post-medieval pottery production – a gradual downturn in the artistic value of the products until it reached the level comparable to the folk pottery of the 19th century.

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