

The beginnings of castles in the Teutonic Knights' state in Prussia

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Abstrakt: Článek se zabývá počátkem stavby hradů ve státě Německého řádu v Prusku v letech 1230 až 1280. Byla to doba dobývání a postupné konsolidace země, kdy monumentální zděná architektura neměla šanci na rozvoj. Tvrze dřevohlinitých konstrukcí převládaly a měly by být považovány pouze za kolonizační nebo "přechodné" hrady. Nedávný výzkum rozšířil naše znalosti o počátcích kamenných a cihelných hradů, které se začaly objevovat už ve sledovaném období a sestávaly z malých komplexů s obvodovými hradbami a jednou budovou.

Klíčová slova: hrady Řádu německých rytířů – stát Německého řádu – Prusko – stavební techniky

In 1228 Duke Konrad I of Masovia granted Chełmno Land to the Teutonic Knights, who were brought to these lands in order to defend Christian Piasts' territories against the threat of Prussian pagan tribes and expand the Christian ecumene. The Order's activities in Prussia were driven by fulfilling the basic duties of 'milites Christi', which meant defending the faithful and fighting the enemies of Christianity. This offensive effort was perceived as a means of protecting the Christian ecumene (Kwiatkowski 2012, 85–87, 103–104). Although Chełmno Land and conquered Prussian territories were parts of many lands belonging to the Order in Europe, their main seat was still in The Holy Land at that time. Almost immediately, using good terms with papacy and the Holy Roman Empire, they took actions guaranteeing their independence from Duke Konrad in these new lands, establishing a nucleus of a sovereign Teutonic dominion in Prussia (Dygo 2009, 53–64).

Soon after being donated lands, the Knights obtained the first fortresses which had been built on the left bank of the Vistula river (in Kuyavia), as Chełmno Land was in Prussian hands. The first of them, Vogelsang, was built for the Knights by Konrad of Masovia, and the second, the stronghold in Nieszawa, was erected by them, or rebuilt, in 1230. Capturing the bridgehead on the right river bank and building a stronghold there (Stary Toruń) in 1231 protecting the crossings from Kuyavian fortresses enabled further conquests (Dygo 2009, pp. 64–65; Poliński 2003, 171–172). The more land they occupied, the more strongholds they erected, locating them along waterways and local settlers' centers (Poliński 2007a, 163). Soon after taking up Chełmno Land, and already having a post in Stary Toruń, the Teutonic Knights built and reconstructed strongholds in Chełmno (present Starogród in 1232), Radzyń Chełmiński (1234), Grudziądz (1234), relocated Toruń (1236), Pokrzywno (the 30s of 13th century) and Kowalewo Pomorskie in the 1230s; Kwidzyn (1233) and Stary Dzierzgoń (1235/1236) in Pomesania; and others farther to the North: Elbląg

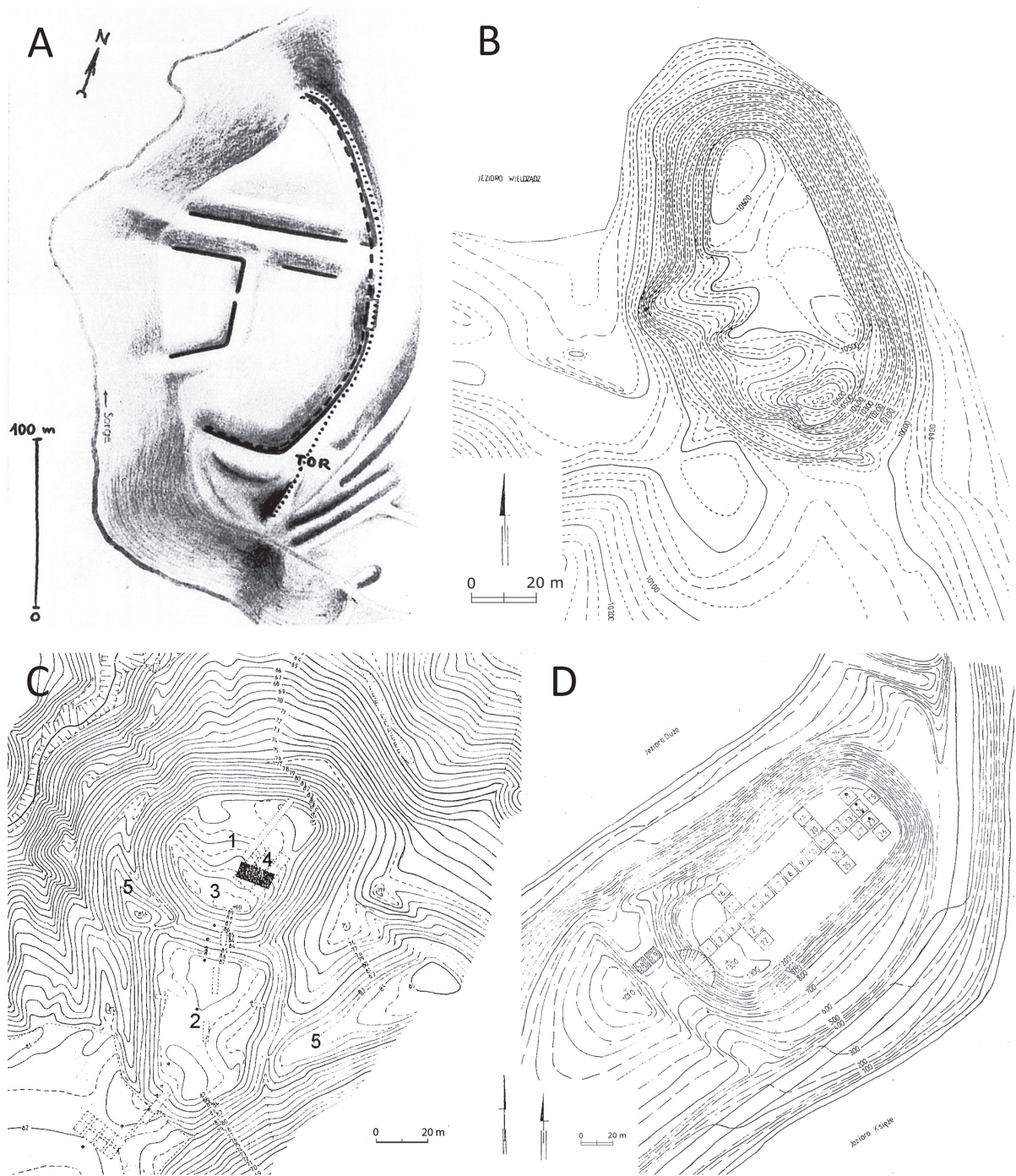


Fig. 1. Examples of Teutonic wooden-earthen strongholds: A – Stary Dziergoń (modified early mediaeval gord; Seefeld 1937), B – Wieldzadz (modified early mediaeval gord), C – Słup (younger Teutonic stronghold upon early mediaeval gord: 1 – central section, 2 – bailey, 3 – frontal rampart, 4 – house, 5 – external ramparts), D – Gruta ('in cruda radice') (Kola 1991).

(1237) and Balga (1239) in Low Prussia. The following decades gave rise to additional objects like Słup (1256), Potterberg (1253–57) or Wieldzadz (the second half of the 13th century – Boguwolski 1994, 190–194; Dygo 2009, 65–67; 2008; Poliński 2003, 182; 2005, 188; 2007a, 160; 2007b, 48–49, 52; Torbus 1998, 361, 400, 427, 637). However, these are just some examples and do not form a comprehensive list.

Until recently, literature saw these strongholds as simple continuations of traditional early mediaeval fortified gord-type settlements (Arszyński 1995, 123; 2000, 20), which should be currently seen as a simplification. In Central Europe, the 13th century was a period of great social-economic changes, which were related to developments in the feudal system, the result of which was also the development of castle buildings (Kajzer 1993, 69–70, 92). Therefore, it is not accidental that 1230 was regarded by Bohdan Guerquin as its beginning in the Polish territories (1984, 15, 44). The date is clearly symbolic and refers to the transformation of the Legnica fortified settlement into a castle. The period of the decline of fortified settlements' in various Polish lands progressed differently, but it corresponds to changes in Prussia. Social, economic and legal changes started together with The Teutonic Order's appearance in these areas. These changes are evidenced by locating the first cities according to Chełmno law in 1233 (Toruń and Chełmno, and later Kwidzyn, Elbląg, Radzyń), and creating the foundation for the Teutonic state. Meanwhile, under the overview of the Order's strongholds, new settlements and settlers started the special policy to protect and preserve the conquest. Municipal centers had military and strategic functions at the time, and their location corresponded to the direction of conquest. The burghers obliged to military service also supported the Knights (Czaja 2013, 81–84; Jasiński 1993, 97–105). Taking all these aspects into account, wooden-earthen Teutonic fortresses must be discussed in the context of social-economic transformations and the objects' function in that period. They should be treated not as a simple continuation of early mediaeval fortified settlements, but as colonization and transition-type castles (Wasik 2016b, 233–252). Such strongholds were erected along the territories of new settlement and colonization areas, where they supported new authorities and administration. The situation was then similar in the lands between the Elbe and the Oder, in Silesia and the Czech lands (Boguszewicz 1998, 103–105; Durdik 1994, 9–10; Herrmann 1986, 230–233; Nowakowski 2017, 36).

The Teutonic Knights did not come to barren lands deprived of stronghold building traditions. Chełmno Land had an unstable social-economic situation at the time and initially the knights had to fight with Prussian tribes which had invaded the area. As the document from Lonyz states, the majority of old gords were abandoned and required intense reconstruction after war damages (Chudziak 2014, 55–56; Poliński 2003, 125, 172; 2007a, 158; Powierski 1983, 17–18). Therefore, new landowners had to convert old ones and erect new strongholds to establish their territories and provide for further military actions (Arszyński 1995, 117–118, 123; 2000, 29; Poliński 2007b, 41). Localization relations between early mediaeval fortresses and Teutonic wooden-earthen strongholds, and later brick castles were more complicated and variable than previously thought (Wasik 2016a, 25–32; Wiewióra 2016, 195–224). The Knights often took over and rebuilt older early mediaeval strongholds that were deserted and destroyed by war or even seized by them, transforming them into their own colonization or transition-type features (e.g. Grudziądz, Pokrzywno, Wieldządz, Dzierzgoń) (Poliński 2016, 263; Wasik 2016b, 237), which can be justified by the state of war, requiring a fast reaction. Adjusted to their needs, existing gords (even these abandoned and destroyed ones) were undoubtedly easier to utilize, and this solution was often preferred to building new strongholds. Moreover, they had already had strategically and defensively suitable locations. Another group consisted of objects situated at new sites (e.g. Stary Toruń, first stronghold in Kwidzyn or Gruta). Sometimes, even though there was an older structure nearby, the Order decided for a new location. That was the case of Słup, where the first stronghold from the middle of the 13th century was founded on the other side of a deep valley, opposite an early mediaeval gord (Kola 1991, 134). Unisław, for example, has a command headquarters from the 1280s built in the direct vicinity of a stronghold deserted in the 11th century, erected on the opposite side of a hill (Wasik 2017d, 68–69). The transition-type castle established in 1232 in Starogród (Stare Chełmno) was translocated from an older center – the Chełmno settlement – situated 1,6 km to the north, in the present location of Kałdus village (Chudziak 2014, 57–59). Eventually, the Knights also took



Fig. 2. Susz. Teutonic wooden-earthen stronghold from the 30s of the 13th century. Photo B. Wasik.

over early mediaeval settlements left behind in the beginning. In Słup, after destruction from 1270s, the gord was restored in the first half of the 14th century, while the settlement ramparts of Kałdus (originally Chełmno) were reutilized later when founding the Potterberg fortress, which operated from the 40s until the 1240s to the 1280s (Kola 1991, 134).

Present research on wooden-earthen Teutonic castles is in progress, but does not provide more detailed characteristics. The structures represented various forms. In case of the ones erected upon early mediaeval gord foundations, they repeated original outlines naturally, as in the cases of Słup (younger fortress), Stary Dzierzgoń and Wieldzadz (Fig. 1). The objects' ground plans were almost elliptical. In Toruń, however, the early mediaeval settlement had been built into U-shape, but the rampart presence was *de facto* evidenced only in the east and north-east. The objects established in 'cruda radice' obtained more regular dimensions – quadrangular (e.g. Susz from the 1230s and Gruta from the 14th century – Fig. 2). Motte-like types were also built, represented by strongholds in Iława (the 70s of the 13th century), Bachotek (Phase I: 12/13th century – the first half of the 13th century; phase II – the second half of the 13th century)¹ and Dąbrówno (the 20s of the 14th century). Some of the objects were equipped with outer baileys. The object in Słup from the first half of the 14th century had one outer bailey, while the wooden-earthen castle in Chełmno-Starogród had two. Similarly, Unisław, could have one or two outer baileys in its timber construction. Objects with more complicated interior divisions, like in Stary Dzierzgoń occurred more rarely (Boguwolski – Kola 1994, 161; Boguwolski – Kurzyńska 2001, 143–145, 158; Chudziakowa – Kola 1974, 8–9; Kola 1991, 149–151, 167–170, 223–225; Radkowski – Wysocki 2016, 316–318, 332–333, 366–367; Wasik 2017d, 74–76).

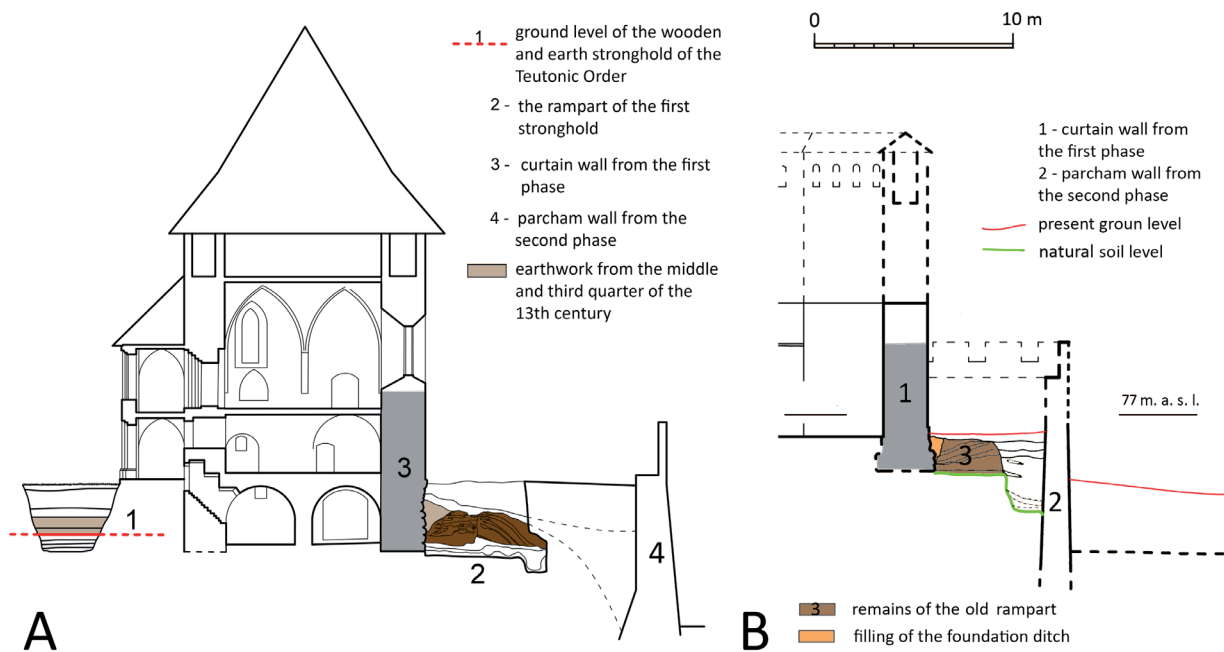


Fig. 3. Circumferential walls of castles: in Toruń (A) and Bierzgłowo (B) situated by inside slopes of old ramparts. Drawing B. Wasik.

Unfortunately, the state of research is not sufficient for detailed characteristics of the ramparts within our interest. The interpretation is difficult because later stone and brick castles were erected upon some of the older castles in later periods. The fact is well illustrated on the example of Grudziądz, where wooden-earthen Teutonic fortifications were leveled during the building of latter castle walls, which could have reflected their original form – a small rampart with a stockade, easily removed during later investment. Similar situation has been discovered lately in Starogród, where the existence of a ditch, protecting the fortress in its first period of existence, was also confirmed (Wasik 2016b, 237–239; 2017c, 51). Exploring Pokrzywno, relics of wooden-earthen ramparts in the northern part of a high castle were identified, although it is difficult to establish univocally whether they should be related with early mediaeval settlement, or rather with the Teutonic period (Boguwolski 1975, 192; Boguwolski – Kurzyńska 2001, 129). In Toruń, presence of a rampart within the area of the eastern bailey (parcham type) was identified in the 1950s-1960s (Chudziakowa – Kola 1974, 26–28) (Fig. 3). This is also evidenced by the analyses of recent excavation results (cf. Wasik 2016a, 85–93). Originally, the rampart was identified as timber-laced; however, later exploration did not confirm any signs of timber-based constructions. Similar observations can be made from Chełmno Land, for example near the Teutonic castle in Kwidzyń, during excavations in the 1930s, where relics of wooden-earthen ramparts of a Prussian settlement later used by the Teutonic knights were evidenced. Within the area, there were also signs of repairs and gate strengthening carried out by the Knights (Heym 1933, 13–14, 21–25). Therefore, doubts have appeared whether there had really been a Prussian settlement before the Order's wooden-earthen stronghold was built (Poliński 2016, 271). A rampart piled in the first half of the 13th century was recently discovered in Zamek Bierzgłowski (Bierzgłowo).² A well-preserved rampart of a command stronghold from the 1280s (preserved section is about 2,5 m high) was also excavated in Unisław (Fig. 4) (Wasik 2017d, 70). It was made of clay and sand layers with an admixture of brick element and lime mortar. The excavated relic indicates that, at least partially, it was strengthened by a coat of stones. The same form of a stone coating or other stone construction may have been used in some

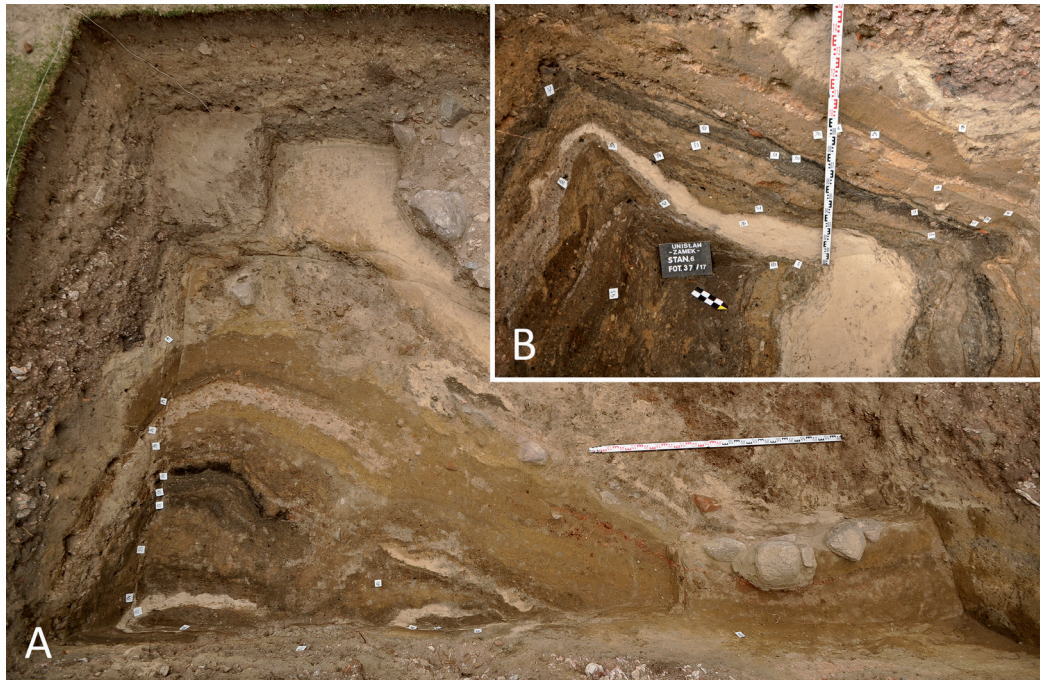


Fig. 4. Unisław. Rampart of Teutonic fortress from the 1280s: A –projection, B – western profile. Photo B. Wasik.



Fig. 5. Second line of lower bailey I ramparts in Unisław (A) and the central fortification element in Słup (B). Photo B. Wasik.

rampart parts of Stary Dzierzgoń, which is evidenced by numerous stones situated at its foot (Poliński 2016, 265). Layers of clay and sand also served for building the rampart surrounding the Teutonic stronghold in Słoszowy from the 14th century (Kola – Wilke 1975, 116–117). Earthen ramparts seem to have been very popular in the discussed period, although timber protection and palisades were also used (Kola 1991, 77–81; Poliński 2016, 265). The wooden stockade identified in Gruta is a significant example. Wherever old early mediaeval gords were used, their embankments were utilized and completed like in Pokrzywno, as described above. In Więdzadz, a defensive rampart and a ditch were erected, protecting the most dangerous side. In Słup, the wall was built from the hill side, outside all the other structures, most probably with a double trench (Kola 1991, 77, 83–84, 86–87, 92) (Fig. 1). In Stary Dzierzgoń, the inner space of a former Prussian gord was divided into sections, building several regular ramparts (Poliński 2016, 263). Some features were equipped with double ramparts (one larger, the other one smaller) at the foot of the main defensive line. Lower terrace embankments are noticeable in Słup, and the bailey I in Unisław. The list is completed by the lower earthen rampart in Słoszewy, which was discussed earlier (Fig. 5).

Inside Teutonic wooden-earthen strongholds, a single house (mostly larger), leaning against the embankments was erected. Słup stronghold, together with a new rampart, had an adjacent framed building with 14 x 6,5 m disposition (Fig. 1). A very similar example was excavated and well-documented at the knightly and later Teutonic seat in Słoszowy. It was a large framed structure, 13 x 75 m, with a small extension on the axis of its shorter, northern side. From the slope side, the building walls were supported by huge posts, protecting the construction from collapsing. The building, as in Słup, was attached to the defensive rampart. This concept was operational in Gruta as well; the building was evidenced at the northern bailey's edge. The structure consisted of two smaller wooden (probably log structural type) houses with one side of about 6 m long, located close to the embankment (Kola 1991, 91, 106–111). Więdzadz did not yield any building relics, but late mediaeval layers contained brick debris, mortar and pugging, which can be evidence of brickwork elements (Matuszewska – Kola 1978, 228). Taking into account the fact that explorations in Unisław have revealed a primitive brick heating stove (hypocaustum) (Fig. 6), the bricks may have been the relics of, but not necessarily, house constructions *sensu stricto* (Wasik 2017b, 50). In Grudziadz, the imprint of a wooden house wall, which can be associated with the Teutonic wooden-earthen fortress, was found in the area of the present high castle yard (Wiewióra 2012, 108–109) (Fig. 7). Because the architectonic composition of the wooden-earthen castle is not known, we are not able to situate the building within the structure, particularly as we do not know its sizes either. Toruń, on the contrary, has brought a stone construction without any mortar signs, situated at the eastern part of the southern wing (Chudziakowa – Kola 1974, 35–36), which should be interpreted as the foundation of a framed building (Fig. 7). Its size was not estimated, but it might have been attached to the rampart by its eastern part, thus standing very close to it. Apart from the house mentioned above, wooden relics of other objects were also excavated (Chudziakowa – Kola 1974, 37).

Information concerning the function of Teutonic constructions can be found in written sources. The document from 1263 states that Warmian bishop Anzelm granted the indulgence to the ones involved in erecting a new chapel in Toruń castle, built from the initiative of the castle commander (CDW 1860, no 45). As the information concerns erecting a new structure, it means that an old chapel must have been operational in the middle of the 13th century. The building relics based on stone foundations are located under the later chapel, and we cannot exclude a rather spatial traditional continuation, although this is only a suggestion that is difficult to verify. The next intriguing information shedding light on the character of Teutonic strongholds concerns an object in Radzyń Chełmiński, which, similarly to Toruń, was a residence of Teutonic commanders from the middle of the 13th century (Jóźwiak 1997, 35, 46). The document from 1285 specifies a chapel



Fig. 6. Unisław. Relics of a heating furnace (hipocaustum) from a wooden-earthen stronghold. Photo B. Wasik.

and another interior serving as a refectory (Wasik 2016b, 241). The presence of a chapel, even in the earliest Teutonic seats, should not be surprising, because they were the only objects described in detail, and were necessary due to the Order's rules (Jóźwiak – Trupinda 2012, 39–41). It also corresponds to a note by Peter of Dusburg, describing the prayers of pious monks in stronghold chapels of Balga and Pokrzywno (Piotr z Dusburga 2004, 57). The presence of dining rooms was necessary for collective operations of knight-monks. This new findings let us reject the older statements, discrediting the credibility of Teutonic annalists' reports, and arguing that monastic life in the reality of war was not possible (Arszyński 1995, 124). The buildings were constructed mainly of light material – wood and framed structures – which is evidenced in Peter from Dusburg's report, when he informs in 1283 that the Potterberg stronghold was dismantled and its elements were transported and used for building a new seat in Gniew (Piotr z Dusburga 2004, 160). The residences were not deprived of basic comfort, though, which is also confirmed by excavation, which proved that a simple stove with heating stones existed (hypocaustum) in Unisław (Fig. 6). In brick castles, hypocaustum stoves heated refectories, and later rooms of a commander and dignitaries. The furnace from Unisław could have heated the convent refectory located in the wooden-earthen fortress.

Some temporary Teutonic castles had towers, which is reported in written sources. In 1262, during the Prussian siege of Bierzłowo castle, the defenders hid in a tower situated within the stronghold area (Piotr z Dusburga 2004, 135). Moreover, interesting information is known from other sources concerning Klaipėda in the middle of the 13th century. It states that apart from the central defensive object, the stronghold situated on an island in the mouth of the Curonian Lagoon also consisted of a tower (Jóźwiak 2015, 8). Unfortunately, it is difficult to state whether these separate constructions were ordinarily erected near fortifications. The structures must have been built of wood – probably in post-frame construction.

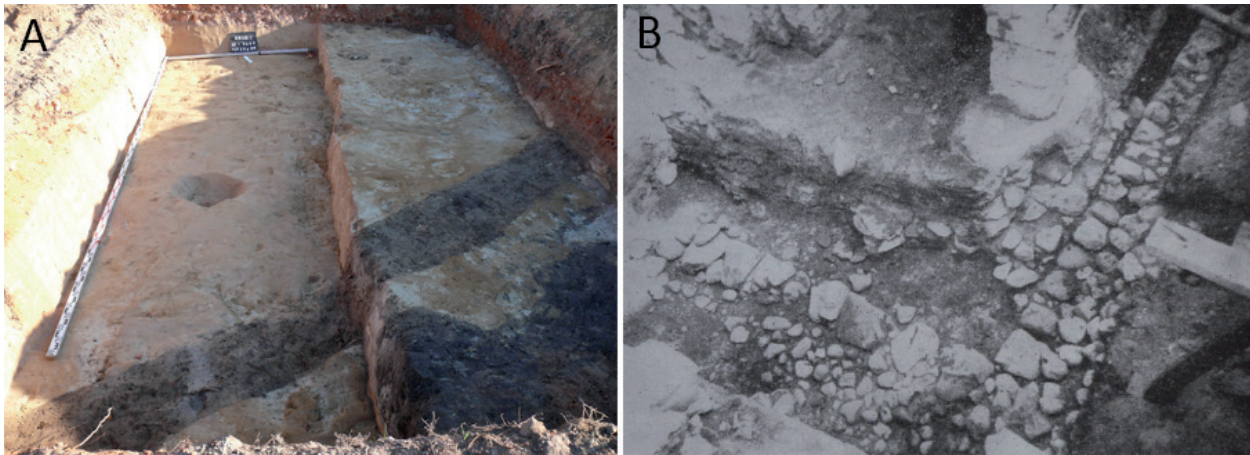


Fig. 7. Relics of internal buildings of Teutonic wooden-earthen fortresses: A – negative image of a wooden house in Grudziądz. Photo M. Wiewióra. B – stone foundations of a wooden house (probably timber framing) excavated under the eastern part of the southern wing of Toruń castle (Chudziakowa – Kola 1974).



Fig. 8. Toruń. Stone wall from the middle of the 13th century. Photo B. Wasik.

As is obvious from Peter of Dusburg's reports, in the turbulent times of conquests, the castles described above must have been changing hands and had to be rebuilt later like Brandenburg, or were deserted like Spittenberg (Piotr z Dusburga 2004, 119–121, 131). Events of the first Prussian uprising, when in 1243, the Teutonic Knights were able to keep only Elbląg, Bałdz, Toruń, Starogród and Radzyń Chełmiński (Dygo 2009, 69), made them realize all the disadvantages of wooden-earthen fortifications. This might have been the impulse for the first brick castles to be erected (Toruń, Starogród, Balga, Dzierzgoń?), and after the following struggles in the 1260s and 1270s, other new castles were also built (Bierzgłowo, Grudziądz, Pokrzywno). Selected wooden-earthen fortifications were rebuilt into stone and brick castles, and became centers of new administrative units of the Teutonic state created in the middle of the 13th century – commanderies (Józwiak 1997; 2001, 72). It did not mean, however, that the foundation of old wooden-earthen fortifications was halted, as the commander seats in Unisław, Wieldzadz and Radzyń Chełmiński maintained their old forms until the beginning of the 14th century, when the first two locations were dissolved, and the third one was rebuilt into a brick castle (Wasik 2016a, 298–299; 2017d, 68–70; Józwiak 1997, 129). The tradition



Fig. 9. Toruń. Brick castle projection in the 60s–70s of the 13th century. Drawing B. Wasik.

of erecting old type of fortifications lasted until the beginning of the 15th century, when, for instance in Pień (Chełmno Land), such a structure was erected as a seat of a prosecuting officer with a tower manor house of framed construction on a mound (motte), and these traditional fortresses were still operational in warfare raging in the eastern Teutonic borderland (Arszyński 2000, 30; Poliński 2013, 168–177; 2016, 262).

Toruń is considered to be the first Teutonic castle to have stone and brick elements. At first, a stone wall from the east was erected at the base of the old rampart, then from the north (Fig. 8), with a gate tower (later walled up). That wall originally ran to the south, farther than it is obvious today, but its range is not known (Nawrocki 2005, 19). It shielded the castle from the valley wetlands, and from a blind spot not covered by the growing Old Town of Toruń. According to Jerzy Frycz the stone wall had been built around 1236–1240 (1963, 85; 1986, 32). However, it seems doubtful whether the walls were erected so early, as that was the time of wooden-earthen construction. As we know, the commandery in Toruń was established between 1248 and 1251 (Józwiak 1997, 35), and in 1255 the walls and a tower were built, which may very well only apply to the wall and the tower gate³ (Wasik 2016a, 145; 2016b, 245). Therefore, the building origin can be associated with transforming the stronghold into a commander's seat. That may have been the time of building

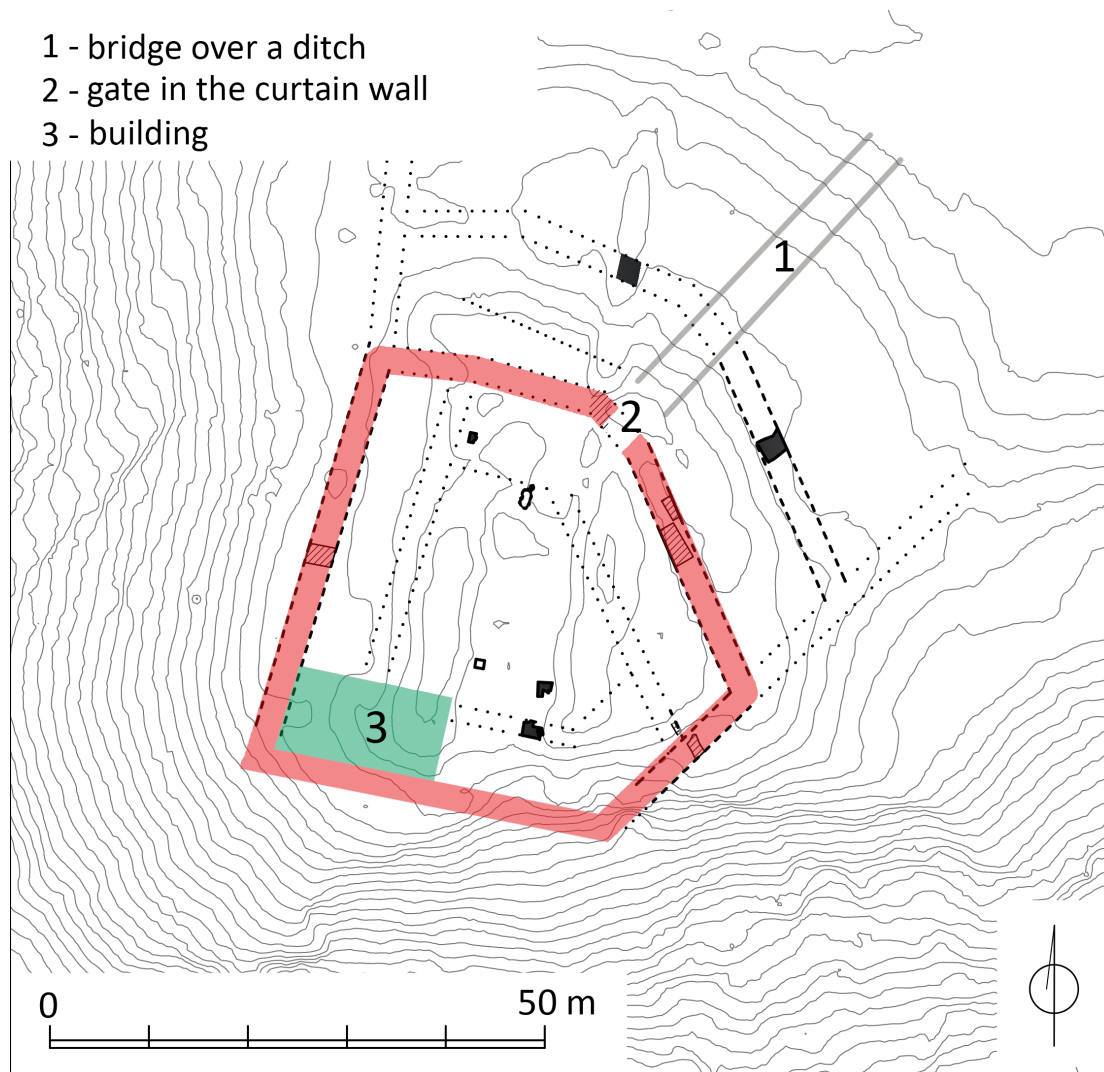


Fig. 10. Starogród. Supposed reconstruction of original form of the high castle, second half of the 13th century. Drawing B. Wasik.

several sections of the circumferential curtain wall of the high castle (convent house) – central fragment of the southern wall and the ground southern section of the eastern curtain wall. In the second building phase, the U-shaped wall surrounding the convent house (Fig. 9) was completed (connecting sections built earlier), lifting up walls of the internal side of the older earthen embankment, leveling it partially (Nawrocki 2005, 9–10; Wasik 2016a, 246).⁴ Old, partially leveled ramparts were also used to some extent – the eastern one became a rampart of a new line, and if strengthened by a palisade, may have served as an external fortification (Fig. 3).

Erecting a circumferential curtain of the convent house in Toruń must have been connected with intentions of building the southern wing and covering the structure from the eastern side with wooden ceilings. The building was not finished though and in the future, other concepts would be completed. First, an eastern room of the ground floor of the later southern wing was constructed, which can be associated with the foundation of a new chapel in the 1260s (Fig. 9). Although the foundations may have been erected together with the circumferential curtain, the ground floor was completed in the next building phase, during which a small rectangular building (about 11,7 × 16,6 m) was built, supported with buttresses from the yard side; they could have secured

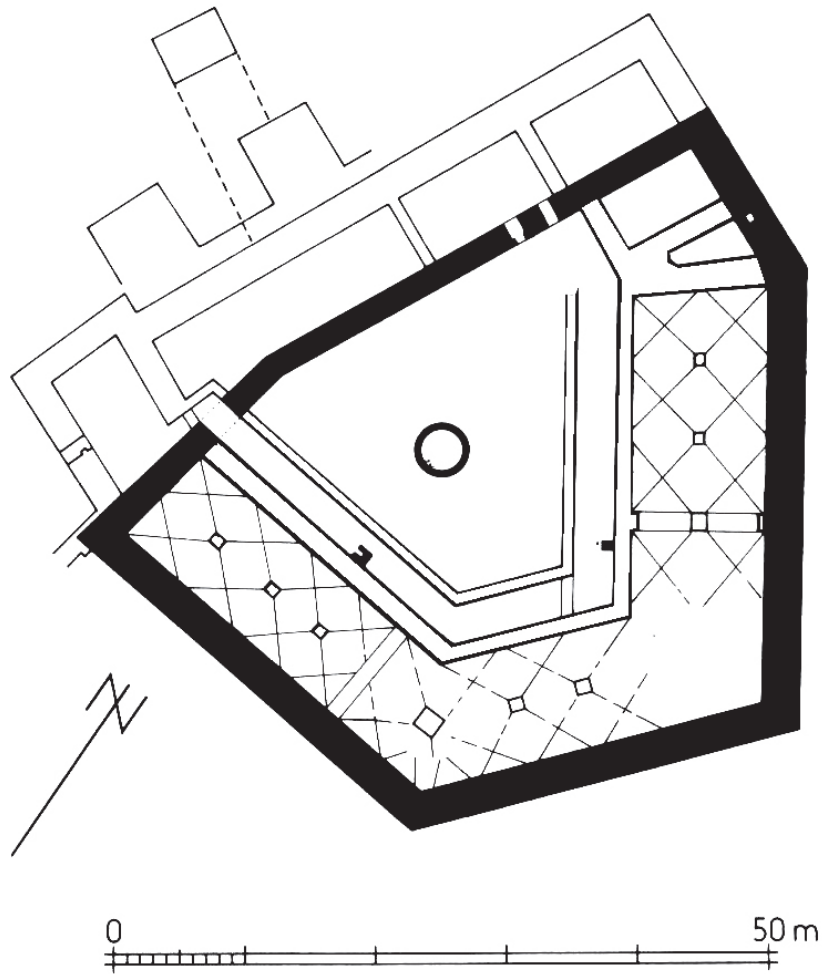


Fig. 11. Balga. High castle plan (convent house) with a circumferential wall in the first stage; features erected after the middle of the 13th century marked black (Torbus 1998).

a gallery construction. Probably in the 1230s, a neighboring house was adjacent from the west, the more regular shape of which indicates different construction phases. Importantly, architectonic features also indicate that during the erection of the first house there were no conceptions of future monumental eastern wing, because the buttress of the original structure ended up inside the later building eventually. In the discussed period, rooms of the first store of the oldest house did not exist, and were completed at the end of the 13th century, together with a long southern wing (which had not been planned in such a large size), where the first building became its integral part. These investments exceed the chronology accepted in the article and belong to the next stage of castle building in Prussia (Józwiak – Wasik 2017, 141; Nawrocki 2005, 11; 2017, 18–21; Wasik 2016a, 248; in print). It should be stated, however, that the 1260s–1270s are the years of erecting a brick circumference of a bailey with wall towers, what distinguishes Toruń stronghold as one of the first or even the first one possessing a bricked ward (Wasik 2016a, 248–249).

Characteristics of the original Toruń brick castle seem to be typical for other castles erected until the 1280s. Nonetheless, the constructing process started with a circumferential wall of the convent house – a single rectangular brick building was made (Fig. 10–14), probably completed by other wooden household objects which are difficult to recognize now. In the early phase, there must have been houses of the wooden-earthen stronghold stage. Moreover, the first brick

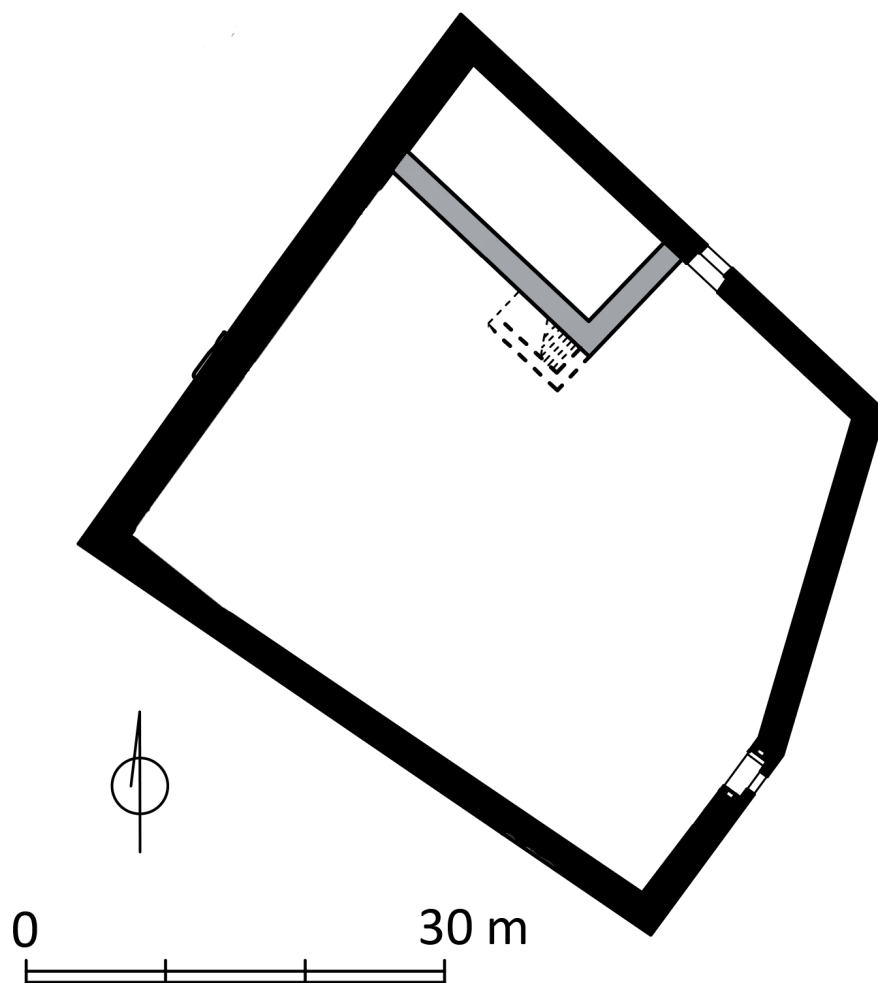


Fig. 12. Bierzgłowo (Zamek Bierzgłowski). High castle reconstruction in the first stage of construction in the 1270s–1280s. Drawing B. Wasik.

building was identical in localization with a chapel in all castles' plans, and was situated in later central castle wings, which is apparently not accidental as a chapel was the only interior required by the Teutonic Order's regulations (Wasik 2016a, 251). Closer analysis of particular objects demonstrates certain differences in these early structures in both building phases and spatial arrangement. Everything was irregular and based on the original old rampart shape and the local relief. It is noteworthy that older castles (Toruń, Starogród and Balga), which began to be erected in or after the middle of the 13th century are clearly characterized by a more multilateral outline. Castles slightly younger (Bierzgłowo, erecting of which started about 1270, Grudziądz and Pokrzywno, built in the 1270s–1280s) are more compact and regular. Unfortunately, nothing can be stated in the case of Dzierzgoń castle, the foundation of which is only assumed in the middle of the 13th century because its plan is not known and the state of research is only fragmentary.⁵ In fact, this first wooden-earthen construction was situated elsewhere – in Stary Dzierzgoń, but because it was taken over by the Prussians and the Knights would not be able to regain it, they started erecting a new castle in another location. The survey has revealed the fact that the Knights selected an early mediaeval hillfort abandoned by the Prussians, so despite translocation, a brick castle was placed on the foundations of an old wooden-earthen object (Pawłowski 2003, 284–285; 2005, 212–213; Poliński 2016, 263).

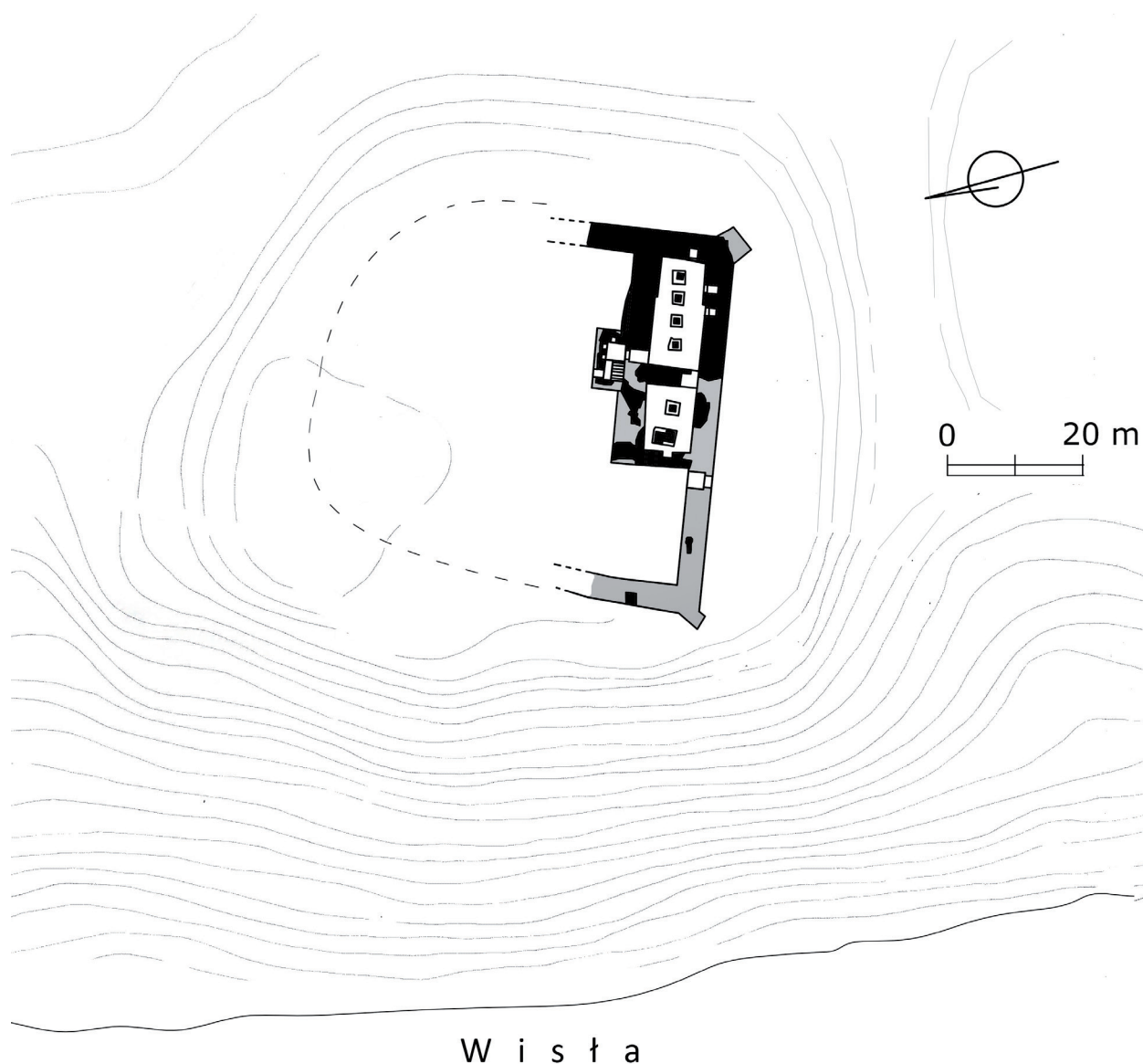


Fig. 13. Grudziądz. High castle reconstruction in the first stage of construction in the 1270s–1280s. Drawing B. Wasik.

Recent research in Starogród indicates that in the period of our interest, a circumferential curtain built into an irregular pentagon shape was constructed (Fig. 10). Interior brick buildings were erected in a later period – at the turn of the 14th century; the short wing, however, housing a chapel had been founded in the first castle building stage. Its location in the castle’s southwestern corner can be identified based on modern descriptions. The long building interval between the curtain building’s foundation and the wing’s completion shows that similarly to Toruń, they were conducted in separate investment stages (Wasik in print). In Bałga (Fig. 11), the first stage included erecting a brick circumferential curtain of multilateral outline, but as no further survey has been conducted, the chronology of internal arrangement is not recognized (Torbus 2014, 67–69). It is significant that in Toruń and Starogród castles the oldest buildings were placed as far from the most endangered part, the Vistula slope side, as possible. In younger castles (Bierzgłowo, Grudziądz, Pokrzywno) they were situated to the front, near the gate (Fig. 12–15). In the light of the recent studies, the northern wing in Bierzgłowo, measuring 11,5 by 22 m, was erected like in Toruń, and probably in

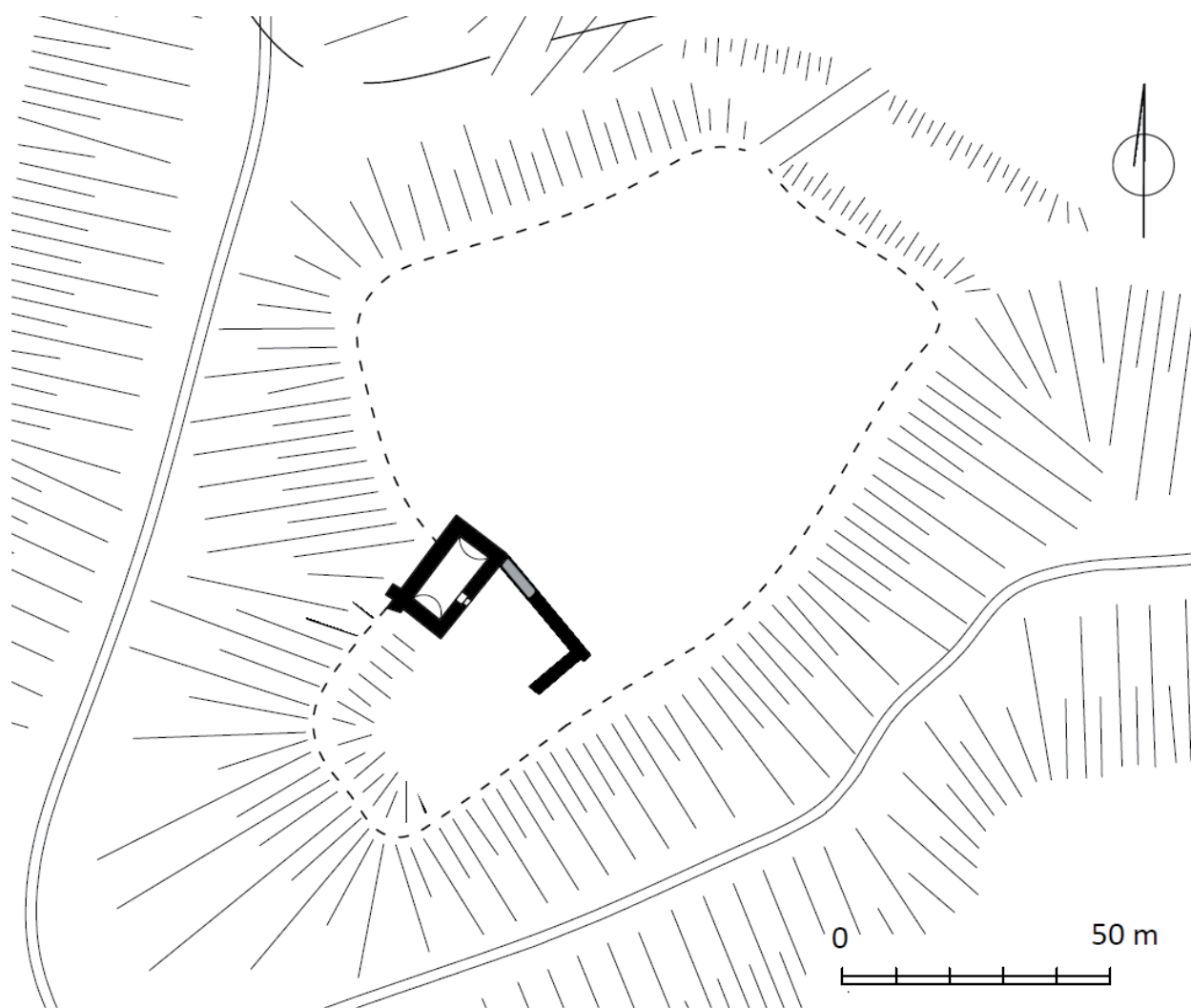


Fig. 14. Pokrzywno. Castle reconstruction in the first stage of construction in the 70s–80s of the 13th century. Drawing B. Wasik.

Starogród, in the next investment stages. In Pokrzywno and Grudziądz, the wings were constructed together with a circumferential curtain. In the first example, the building referred to the eastern part of the future northern wing measuring 11,5 by 20 m, while in Grudziądz, it consisted of two rooms in the southern wing with a size of 15 by 34 m. Simultaneously, in the case of two last castles, we are not sure if the circumference wall, the foundation of which had started from the most endangered side, was finished in the discussed period. We suppose that at least in the case of Grudziądz, the finishing may have taken place later, in the times not studied in the article (Wasik 2016b, 247–249; 2017e, 4; in print; Wasik – Wiewióra 2015, 75–79). Significantly, architectural analysis indicates that erecting these buildings, as in Toruń, neither additional brick buildings, nor monumental wings were planned in the neighborhood, but they were added later, incorporating the original ones as components of the latter. As a result, in Pokrzywno, for instance, extending the northern wing, and erecting the eastern one caused further adjustments in placing window openings and doors in the original building. In Grudziądz, the younger part of the southern wing was narrower; in Bierzgłowo, as a result of the later western wing building, the foundation plinth of the old house was situated in its cellar. The castle curtain wall, erected in the first stage did not have any windows for those cellars either (Wasik 2017e, 5; in print). We can conclude that these early castles were not

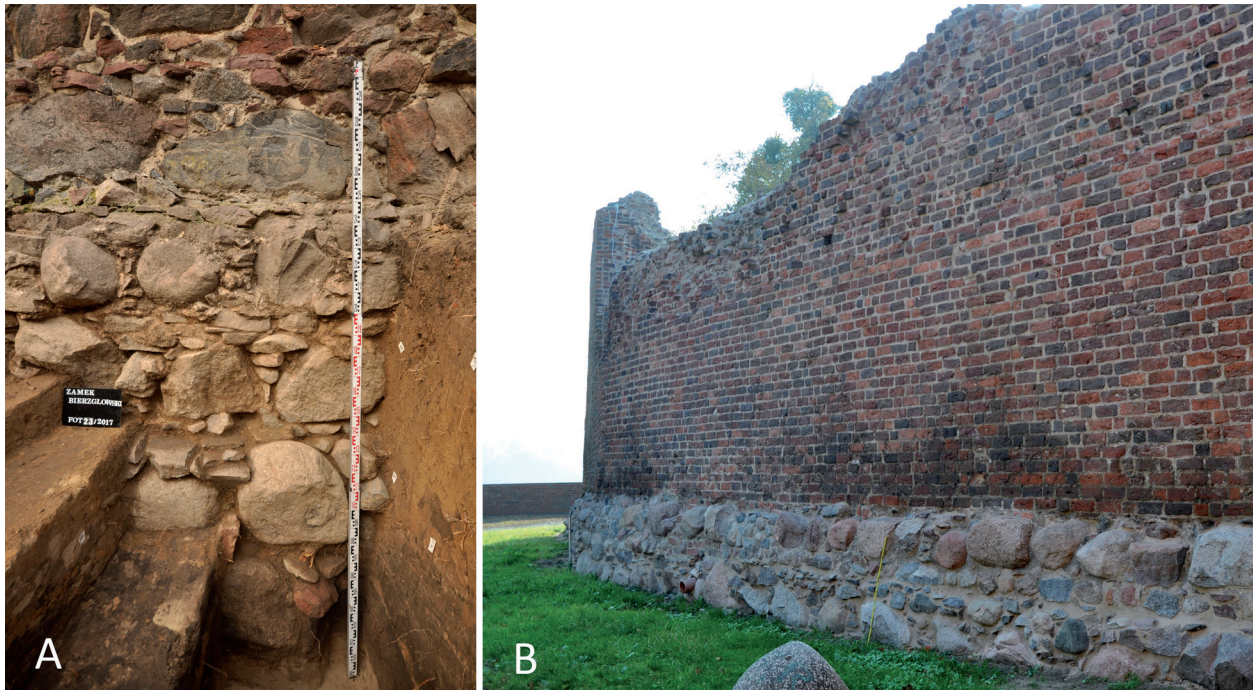


Fig. 15. Examples of wall construction of high castles (convent houses): A – foundation of circumferential wall in Bierzysłowo, B – circumferential wall in Toruń. Photo B. Wasik.

completed in the discussed period. The change of conceptions took place during their erecting, therefore higher levels and other changes were performed in later periods when the castles were given monumental, two or three winged character not designed before.

Recent analyses and research of Chełmno Land castles make it possible to outline characteristics of building techniques of these early stone and brick fortresses. Metric analyses of projections indicate that old Chełmno measurement units⁶ were used (Bierzysłowo, Pokrzywno), but together with new ones⁷ (Grudziądz) coexisting in the second half of the 13th century, displacing the original ones slowly in the 14th century (Wasik 2016a, 41–42, 47–48). Ramparts of the past period were leveled only partially, their upper layers were removed and stone walls erected by their inner sides (Toruń, Bierzysłowo) (Fig. 3), or within their thickness (Pokrzywno). In other cases, old fortifications were removed completely, hence lacking any relics (Grudziądz and Starogród⁸; Wasik 2016a, 74–76, 79, 85–87; 2017a, 43–46; 2017e, 10). Stone foundations were put into narrow trenches, usually mortared without any plinths or with a very delicate wall coping (Pokrzywno, Toruń). In Grudziądz, the foundation was even narrower than the wall over the ground. Only in Bierzysłowo, the curtain wall foundation has clear worked curves (Fig. 15). The discussed castles can be characterized by differences in foundation levels of particular curtain sections, contrary to later regular forms. In Grudziądz, the difference is about 6 m, in Toruń about 1 m, in Starogród up to nearly 3 m, and in Bierzysłowo (based on a cellar foundation) over 2,5 m. The main reason of this may come from the ground configuration, but it could have been an effect of different building stages as well. The foundations were regularly placed on natural layers – preferably clay, sometimes sand. Bottom stone layers were laid into the bedding trench without any lime mortar with just some clay supplement. Moreover, the brickwork became more regular and stones were combined with lime mortar (Wasik 2016a, 184–188; 2017a, 41–42; 2017e, 11). A stone socle was mortared above the ground level into layer stonework, its height varying from about 0,7 m in Toruń (Fig. 15) up to about 5 m in Bierzysłowo. Moreover, a brick wall was bricked in Wendic bond, which was used as the only



Fig. 16. Bierzłowo (Bierzłowo castle). Pattern of burr brick on northern façade of northern circumferential wall. Photo B. Wasik.

kind of masonry in Prussia before gothic bonds appearing in the turn of the 13th century. In Bierzłowo's front façade, it was enriched by the composition of a polygonal chain of black burr bricks (Fig. 16). This element can be dated to the 1280s; it can be therefore considered one of the oldest examples of such decorations in Prussia (Wasik 2016a, 192–210, 227–228; 2017e, 13; in print). Walls were lifted up from scaffolding, pavements of which were resting on one line of posts and poles, anchored into the wall (single-pole scaffolds), which left characteristic putlog holes. The holes do not appear everywhere (e.g. in Toruń, some sections of walls in Bierzłowo), which can indicate that they were either bricked up or the scaffolds used were supported by two rows of posts, not fixed into the wall (double-pole scaffolds; Wasik 2016a, 213–214). Cellars were vaulted (Fig. 17), although on higher floors, wooden ceilings were also made only to be later replaced by brick vaults as seen on the example of Toruń (Wasik 2016a, 237).

Apart from digging foundation trenches and old rampart leveling, building investment of that time did not include any other important earthwork (the ground was not modified or flattened as it was in later period), completing only basic work for cobbling, 20–40 cm thick. As a result of that negligence, castle yards in Pokrzywno and Grudziądz remained rugged and slanting (Fig. 18–19). In Starogród and Bierzłowo, natural land form made it flat and even. Only in Toruń (Fig. 3) the yard level was successively lifted by leveling embankment about 1 m thick (Wasik 2016a, 113–114).

The above characteristics give an impression of the first Teutonic castles as rather simple structures, especially when compared to later forms, which is not surprising as large building investments required developed infrastructure, economy and administration. By the second and third quarter of the 13th century, they had not achieved proper level in Prussia yet, as that was the time of building the foundations of the Teutonic state, which reached its prosperity in the 14th century. Until the 1280s, almost all financial means had been consumed by constant military conflicts and



Fig. 17. Pokrzywno. Building cellar from the 1270s–1280s. Photo B. Wasik.

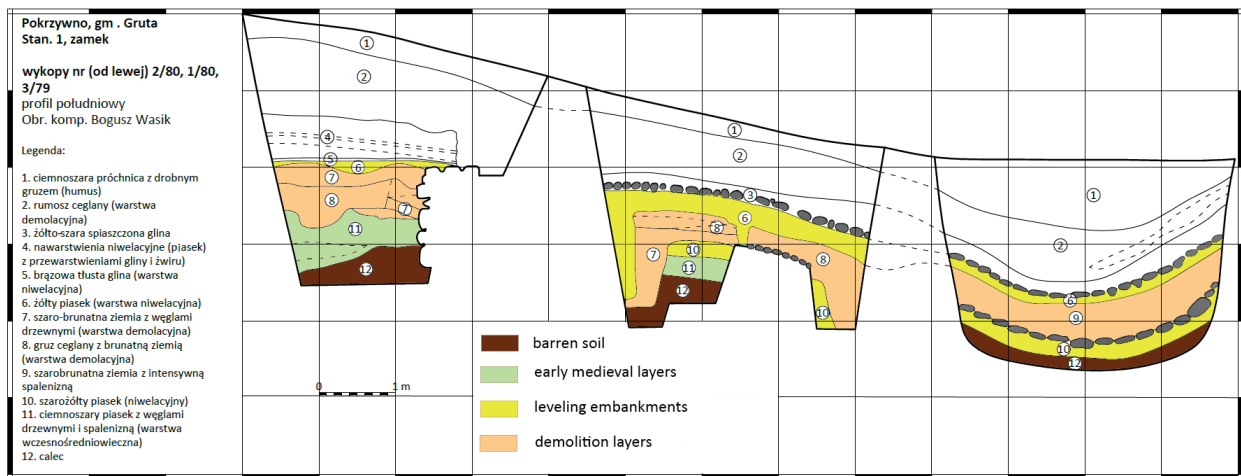


Fig. 18. Pokrzywno. Convent house yard layers. After R. Boguwolski, digit. B. Wasik.

in addition, the conquered land did not provide any specialists. When the country stabilized, the administration was established and the significant settlement process intensified in the last quarter of the century, it was finally possible to build a proper base for brick architecture to flourish at the turn of the century (Arszyński 2010, 11, 14; Herrmann 2007, 290; Wasik 2016a, 317–318). Unfinished castle buildings then continued on an entirely new spirit.

In conclusion, some remarks should be made concerning forms of the first brick castles in Prussia in a broader context. Old literature searched for analogies of these structures in knightly

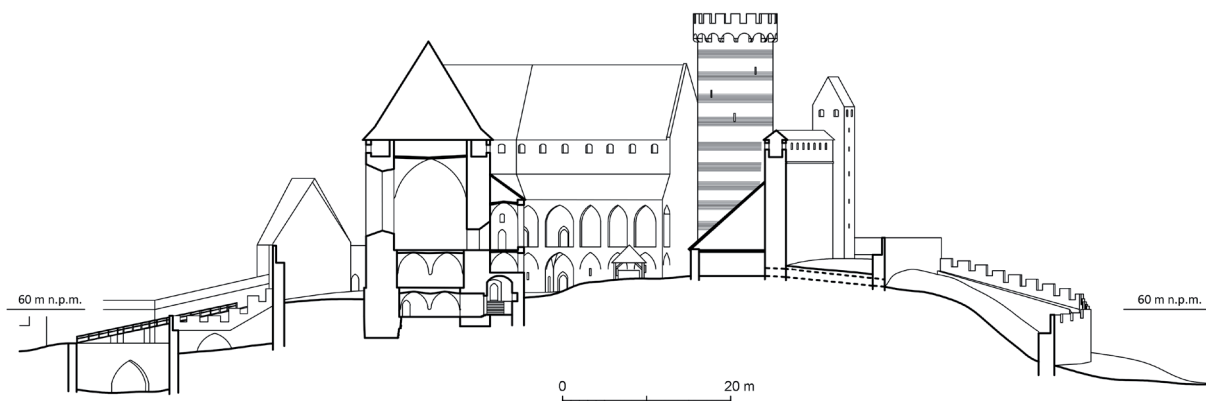


Fig. 19. Grudziądz. Reconstruction of the convent house (high castle) cross-section with clearly slanting yard configuration. State of development from the 14th century. Drawing B. Wasik.

residences in Eastern Germany and Thuringia (Arszyński 2010, 30; Kutzner 1995, 44), although they should be compared more to 13th century Teutonic commanderies in Germany and Bohemia. They were usually irregular establishments with several stone and brick buildings, situated in various locations with a chapel (e.g. in Prague, Miletino, Koblenz and Beuggen). Recent studies also show analogies with the seat of the Livonian Brothers of the Sword in Riga from the beginning of the 13th century – buildings and a chapel located irregularly around the structure inside. Some of the fortresses as Koblenz and Beuggen were additionally equipped with residential towers (Durdík 2004, 48–52; Liessem 2004, 104–110; Ose 2004, 120–122). The tower in Koblenz commandery is particularly interesting for its roomed representative interiors on the first floor⁹ (Liessem 1996, 51–52). The quoted features did not have such a clear fortification character as the Prussian ones, which resulted from the political situation. One more castle is worth attention in this context – Bradlo castle in Bohemia, erected by the Teutonic Order at the end of 13th century, or slightly later. It was an irregular structure with a circumferential dry stone wall. A residential tower on a quadrangular plan with the ground floor made of stones and higher floors in a framed technique stood close to the wall. Another brick house and some wooden household constructions were placed nearby (Durdík 2000, 79). We can see a similar spatial arrangement and development like in the castles of Chełmno Land discussed in the article.

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- ¹⁾ A lack of written sources is an obstacle in attributing clearly the stronghold at Straże Lake in Bachotek to the Teutonic Order. In later periods it was a knightly property. Historian Jan Powierski presented many arguments indicating this settlement as one of the possible localizations of Strasberg stronghold, which is mentioned in the 1260s, preceding Brodnica (Strasburg) town and castle location in its present site (Powierski 1993, 52–54).
- ²⁾ Excavations in Zamek Bierzglowski and Unisław were conducted during the research project *Castra Terrae Culmensis – narubieżychrześcijańskiegoświata* (*Castra Terrae Culmensis – at the edges of the Christian world*) in 2017. The project was led by Marcin Wiewióra of the Institute of Archeology, UMK in Toruń (research programme 2bH 15 0078 83) and is financed as part of a grant from the National programme for the Development of Humanities, Development Module 2b. Excavations were led by the author of this paper.
- ³⁾ Another tower which could be connected with this castle building phase is not assumed in the light of present research.

- 4) It should be stated that the U-shaped castle projection is not necessarily a result of an original bulwark design. The example of the Teutonic seat in Beuggen (Niemcza; Fig. 17), erected 'in cruda radice' in the middle of the 13th century based on a semicircular plan (Liessem 2004, 106) is highly informative. However, the location of a stone section of the southern rampart seems to confirm the U-shape of the original bulwark. This section could have closed a gap in the fortress from the river side.
- 5) The author of the study, Antoni Pawłowski, died before its completion and publication. Literature includes only projections of central buildings and basic conclusions, without complex reconstruction and characteristics (cf. Pawłowski 2003; 2005; 2008).
- 6) 1 foot = 31,3 cm.
- 7) 1 foot = 28,8 cm.
- 8) Due to it, prehistoric levels appeared in Grudziądz and Starogród in shallow layers.
- 9) The tower was not erected by the Teutonic Knights, but they captured and rearranged it in 2nd quarter of the 13th century. The cellar and the ground floor had brick vaults, rebuilt in the late Middle Ages.

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Bogusz Wasik: Die Anfänge der Burgen im Deutschordensstaat in Preußen

Die in das Kuyavian-Vistula-Land ankommenden Deutschen Ritter bauten in den danach kommenden Jahrzehnten eine Reihe von Festungen aus Holz und Erde. Die Festungen sollten das eroberte Land schützen und die Positionen der neuen Ordnung stabilisieren. Das galt insbesondere in der Zeit der bedeutenden sozioökonomischen Veränderungen, die aus der Einführung eines neuen Regelsystems und aus der Entstehung und Entwicklung von neuen Siedlungen erfolgten. Die errichteten Festungen bildeten keine direkte Fortsetzung von früheren mittelalterlichen Siedlungen und sollten als Kolonialisierung und als temporäre Burgen betrachtet werden (diese werden von verschiedenen Formen repräsentiert: Bollwerk, Wallumfang, seltener auch Motte-Typ). Sie wurden entweder an der Stelle der frühmittelalterlichen Siedlungen, oder außerhalb erbaut. Sie wurden mit Bollwerken befestigt und geschützt, die Häuser aus einer leichten Skelettkonstruktion wurden damit kombiniert und dienten den neuen Mönchsherrschern des Landes. Normalerweise enthielten die Festungen auch eine Kapelle und wahrscheinlich ein Refektorium, das aufgrund der Ordensregeln gefordert wurde.

Seit der Hälfte des 13. Jahrhunderts (Toruń, Starogród, Balga, Dzierżgoń?) und vor allem seit den 70er Jahren des 13. Jahrhunderts (Bierzgłowo, Grudziądz, Pokrzywno) wurden die ausgewählten Objekte in den Zentren von neu positionierten Kommandanten, die ursprünglich einen Holz-Erde-Charakter hatten, von

einfachen Forts zu Ziegelbauten mit charakteristischen Einzelhäusern umgebaut, die sich auf die Lage einer Kapelle beziehen. Die Errichtung von neuen komplexen Flügeln war bis dahin nicht geplant und wurde erst nach Ende des Jahrhunderts laut völlig neuen architektonischen Vorstellungen hinzugefügt. Diese ersten Entwürfe waren wahrscheinlich nie fertiggestellt worden. Der Bau von Umfassungsmauern, die die alten aus Holz und Erde ersetzten, begann mit unregelmäßigen Arrangements mit einzelnen Häusern und Holzhausbauten aus der vorigen Periode (sie ähneln in Form den teutonischen Kommandanten aus dem heutigen Gebiet Deutschlands und Tschechiens, als besonderes Beispiel dafür kann das tschechische Schloss Bradlo mit der ähnlichen räumlichen Konzeption genannt werden).

Die Wände wurden in schmalen Fundamentgräben errichtet, Stein - im unteren Teil, Ziegel - höher - und in der Regel ältere Befestigungslinien. Die Erdwerke wurden entweder ganz, oder teilweise entfernt - in den oberen Ebenen. Damals wurden keine anderen Erdwerke durchgeführt, die für die späteren Zeiten charakteristisch waren, also bei einigen Burgen blieb an den Vorhöfen ein differenziertes Terrainprofil.