



CASTELLA MARIS BALTICI 6

CASTELLA MARIS BALTICI 6

CASTELLA MARIS BALTICI 6

Editor Albinas Kuncevičius,
Layout Alvydas Ladyga

Front cover: Castle of Trakai

Photos by Albinas Kuncevičius

Back cover: Royal palace in an Upper castle.

*Corrected S. Lasavickas sketch-project 1977–2001,
3 - D view by V. Abramauskas, drawn by A. Mizgirienė*

ISBN 9986-420-55-5
ISSN 1236-5882


Savastis
Vilnius 2004

CONTENTS / ZUSAMMENFASSUNG

Charlotte Boje Hilligsø Andersen	Material culture in Danish castles9
Aleksander Andrzejewski, Leszek Kajzer	The Chelmno bishops' castle in Lubawa in the light of the latest research17
Lars Bengtsson	Three crowns – the royal castle in Stockholm23
Maria-Letizia Boscardin	Die Wasserversorgung auf Schweizer Höhenburgen35
Tomáš Durdík	Zur Einflussproblematik im Rahmen der böhmischen Burgenarchitektur41
Aleh Dziarnovich	Castella Alboruthenica: castle building in Belarus at the crossroads of cultural influences during the 12 th to 14 th centuries49
Øystein Ekroll	Norwegian castles north of the Arctic Circle55
Nils Engberg	Three castles on Hjelm island – their military, social political and significance.....63
Giedrė Filipavičienė	Retrospection of Trakai fortification system in the 14 th –15 th centuries83
Jonas Glemža	Medininkai castle93
Christofer Herrmann	Deutschordensburgen in der „Grossen Wildnis“97
Napaleonas Kitkauskas	The primeval relief of the Lower castle of Vilnius and the earliest building105
Raman Likhashapka	The Western European articles and innovations in the castles' material culture of the Belarusian Nioman Region in the 14 th –17 th c111
Werner Meyer	Burgenbau und natürliche Umweltbedingungen115
Terhi Mikkola	Spatial organization in the late Medieval castle of Häme, Finland123
Michail Miltschik	Die Verteidigungssysteme von Iwango-rod und Narva: Wechselwirkungen in der Entwicklung im 15.–18. Jahrhundert131

Ieva Ose	Die ersten Burgen mit regulärem Grundriss in Lettland141
Tadeusz Poklewski-Koziell	The royal castles and defensive towns on trading routes through Poland to the Baltic Sea in the 14 th–15 th century. A contribution to the history of country defence system planning.....147
Kazimierz Pospieszny	Der preussisch-livländische „Konventshaustyp“ als eine Kloster-und Herrschaftsidee153
Gintautas Rackevičius	The royal palace in Vilnius Upper castle – problems of reconstruction159
Henriette Rensbro	Stige castle 1314 AD – a Danish wooden castle ?.....165
Anders Rejnert	Some Scanian and Scandinavian castles and their relations to the Livonian Order173
Heinz Sauer	Vir nobilis Bernhardus de Lippia (1140–1224), Spurensuche im Balticum185
Daiva Steponavičienė	Gothic period music in the court of the Lithuanian Grand Duchy197
Tomasz Torbus	Die Untere Burg zu Wilna (Vilnius) und ihre möglichen Vorbilder201
Gintautas Zabiela	Castle warfare between Lithuania and the Order in Lower Panemunė in the late Middle Ages211
Algirdas Žalnierius	The first castle of Kaunas219
Rita Mosiejienė	Symposium Castella Maris Baltici VI 231
	Bibliography / Literaturverzeichnis235

On September 18–22, 2001 the Symposium Castella Maris Baltici VI was held in Lithuania. This is already the 6th symposium for the researchers of the medieval castles. The first symposium was held in Turku, Finland in 1991, the second – in Nyköping, Sweden in 1993, the third - in Malbork, Poland in 1995, the fourth - in Estonia in 1997, and the fifth – in Denmark in 1999.

The topic of the conference held in Lithuania was “Contacts and Genetically Dwellings in the Castle Buildings”. Over 40 scientists participated in the conference from Denmark, Belarus, Finland, Sweden, Switzerland, Germany, Russia, Great Britain, Poland, Latvia, Estonia, and Lithuania. In the conference there were not only reports presented but also the most famous castles of Lithuania visited in Vilnius, Trakai, Kernavė, Kaunas and Klaipėda.

The time of this conference coincided with the European Heritage Days “Defensive Fortifications in Lithuania”.

This conference was organised by the Public Institution Academy of Cultural Heritage established by Vilnius University, Vilnius Academy of Arts, Vilnius Gediminas Technical University, Ministry of Culture of the Republic of Lithuania and Department of Cultural Heritage Protection. The Symposium Castella Maris Baltici VI was sponsored by the Department of Cultural Heritage Protection.

The Center of Cultural Heritage funded the publishing of this publication. I would like to express my gratitude to Diana Varnaitė, Director of the Department of Cultural Heritage Protection, Vitas Karčiauskas, Director of the Center of Cultural Heritage, Alvydas Nikžentaitis, Director of Lithuanian Institute of History, Juozas Bardauskas, Director of the Publishing House Savastis, and editors of the publication prof. Werner Meyer and dr. David Gaimster.

Especial thanks deserve my colleagues who organised this event Rita Mosiejienė, dr. Justina Poškienė and dr. Gintautas Zabiela.

Dr. Albinas Kuncevičius

The castles all showed signs of having been built in a hurry, using the trees on the forested island or recycling objects (the side of a boat) as building material. There are no signs in the building of the castles, their houses and towers that point towards social ambition. They were not built as private castles, as is indicated in the folksong tradition, but purely as military strongholds.

In 1295 a treaty was signed between the Danish and Norwegian kings. A very important part of the treaty dealt with the counterfeiting carried out on Hjelm island. To the Danish king this was such a vital matter, that he agreed to let the outlaws and the Norwegian king keep the island as long as they stopped coin production. No doubt the counterfeit coin production, to the amount we have been able to show took place on Hjelm Island, must have been an essential part of an economic struggle, as was the control of trading ships and the plundering of the Danish coasts in the first part of the 1290s. This makes sense, but cannot be the full story. Hjelm was not the only place for example where counterfeit coins were made. The outlaws produced them too at Hunehals in Halland, a much more secure place. Why did they not make all the counterfeit coins there instead of choosing the vulnerable Hjelm Island, so close to the Danish mainland? One explanation for this is that making counterfeit money and using an island situated in the middle of the Danish kingdom as a military base was an attempt on the part of the outlaws to humiliate and provoke the Danish king, topple his followers and get themselves back into power.

The overthrow of the castles.

In 1306 Erik Menved captured Hjelm and burnt the castles to the ground. He wanted to get rid of the enemy threat in the middle of the kingdom, now that the war with the Norwegian king had moved to Halland. To this end he had assembled a large army of professional mercenaries. He can use these to capture the island. We get some indication of how this happened from the archaeological finds. It was not difficult for his war-experienced army to force their way up the cully to the island's high ground north of Skaadebakken. We do not know whether this castle was seized straightaway, was besieged or surrendered. No weapons or parts of weapons were found in the excavations on Skaadebakken so we cannot get close to an answer this way. When the army came up onto the high ground they avoided direct confrontation at first with the central castle at Fyrbakken and instead attacked

Kastelsbakken. The finds of 18 crossbow bolts and three spear-points show that they had to fight to take the castle (Fig. 22).

We can suppose that all the inhabitants of the island fled up to the castles when the attack came. Arrow- and spearheads found on the open ground could be from the crossbow bolts and spears that the defenders used against the attackers. Only one crossbow bolt head was found on Fyrbakken. It is conceivable that they entered into negotiations to avoid unnecessary losses. The castle on Fyrbakken was a strong one for that time and there is no doubt that most of the defenders would have fled there. A hard fight would be necessary if this castle was to be taken. This gave the defenders a favourable negotiating position, which could assure them safe conduct to leave the island with both life and honour intact. Probably Erik Menved had no outstanding claims against the defenders and was interested only in razing the castles to the ground. So we can see the white flag hoisted over Fyrbakken, after which the commanding officer and his soldiers, the manual workers, cooks and those who looked after animals, kitchen gardens and the like and their wives and children all left the castle and made for the ships which then sailed with them to Norway. A few Norwegian merchants were held back. Next, the king's men set fire to the castles. This occurrence can clearly be seen in the archaeological excavations as a black layer - filled with ash, charcoal and the burnt remains of buildings - which lay everywhere and sealed off the relics left behind after 16 years of life on the island.

We had expected that the story of Marsk Stig and the outlaws on Hjelm would come to an end at this point, but here too our investigations brought surprises. Soon after the castle on Fyrbakken was burnt down, it was being rebuilt. Was it Erik Menved who decided to build a castle here? Hardly, otherwise he would not have burnt the castle to the ground. Moreover he had other strong castles, which lay in a much better strategic position for a Danish king. The most probable explanation is that the Norwegian king wanted to assert his right to the island, as is discussed in the Hindsgavl agreement of 1295. He did this by sending men back to the island to start rebuilding the island's main castle. However, Hjelm did not have the same significance for him as it did earlier. The outlaws and their successors were no longer so important in the Nordic power-game, and after confirming his right to the island, he gave it up again. The castle was never finished and Hjelm disappears from Denmark's mediaeval history except in the songs in which Marsk Stig and the island that got horns are still remembered.

Giedrė Filipavičienė

RETROSPECTION OF TRAKAI FORTIFICATION SYSTEM IN THE 14TH - 15TH CENTURIES

Die Retrospektive des Verteidigungssystems Trakai vom XIV.–XV. Jahrhundert

Die Stadt Trakai ist eine kleine Stadt auf einer schmalen Halbinsel, die von vier Seen umschlossen wird; sie ist vielleicht der am häufigsten von Touristen besuchte Ort in Litauen.

Die Nennung der Stadt Trakai findet man schon seit dem XIV. Jahrhundert in den schriftlichen Quellen. Als Hauptstadt des Staates Litauen galt Trakai von 1316 bis 1323. Während der Herrschaft des litauischen Großfürsten Vytautas in den Jahren 1395–1430 hat die Stadt eine besondere politische Bedeutung bekommen.

Den Außenteil bildeten die Erdhügel und die Siedlungen der Tartaren.

In der zweiten Hälfte des XIV. Jahrhunderts gab es in Trakai zwei gemauerte Burgen – auf der Halbinsel und auf der Insel. Die Burg auf der Halbinsel wurde auf einem Vorsprung gebaut, der durch einen tiefen Graben – Fossa, der mit dem Wasser gefüllt war – von der Stadt getrennt. Diese eine Burg hatte zwei Höfe. Aus dem Vorderteil ragten sieben Türme heraus. Alle Türme waren viereckig, gemauert aus Natur- und Ziegelsteinen.

Es ist möglich, vier Bauphasen der gemauerten Burg auf der Halbinsel zu unterscheiden:

- Phase 1 – der Anfang des Baus der Burg vom Garde-Typ mit einem großen Turm (15x15m) auf dem nördlichen Teil der Halbinsel,
- Phase 2 – die Umsetzung des Planes der vorderen Burg mit sieben Türmen und den Verteidigungsmauern dazwischen,
- Phase 3 – der Abschluss des Baus des vorderen Tei-

les der Burg, die Einfassung des Hügels "Opfer" mit Verteidigungsmauern,

- Phase 4 – der Baubeginn auf dem Hügel "Opfer", der vermutlich auch nicht abgeschlossen wurde.

Die Burg der Trakai-Insel ist eine der besterhaltenen Burgen aus der Zeit des Großfürstentums Litauens. In der architektonischen Komposition der Burganlage dominiert der Donjon des Hauses (Schlosses) des Großfürsten, über fünf Etagen. Dieses Schloss wird gebildet von zwei Bauteilen über drei Etagen und einem Innenhof dazwischen. Vor der Burg stehen vier Verteidigungstürme, an den Verteidigungsmauern sind die Teile des Gebäudes angeschlossen, die für die Soldaten und als Schuppen gebraucht wurden.

Die Burg hat man auf drei Inseln gebaut. Aufgrund der Ergebnisse von Forschungen kann man drei größere Bauphasen erkennen:

- Der Bau wurde auf der höchsten Insel angefangen, wo jetzt das zentrale Schloss steht; es wurde geplant, das Schloss U-förmig und mit einem Hof vor dem Schloss zu bauen; Die Forschungen haben gezeigt, dass diese Bauten abgebrannt wurden;
- Während der zweiten Bauphase hat man ein repräsentatives Schloss gebaut und einen Teil der Verteidigungsmauer, die das Schloss einfasst.
- Während der dritten Bauphase hat man die Bauten vor der Burg gebaut, für den Bau der Türme hat man solche Stellen der Insel in der Nachbarschaft gewählt, die sich am besten eigneten und am höchsten aufragten.

Giedrė Filipavičienė
Institute of Monuments Restoration
Žemaitijos 13/102001 Vilnius, Lithuania

Trakai is a small town situated on the narrow peninsular surrounded by four lakes. It is one of the most visited the tourists sites in Lithuania. The town is attractive both for its unique natural surroundings and for its ancient history.

One can find name of Trakai mentioned in the written historic sources starting from the 14th century. Then it used to be one of the centres of the Lithuanian Grand Duchy. The foundation of Trakai was described in Lithuanian chronicles: "... once the Grand Duke Gediminas left his capital city of Kernavė for hunting in five miles distance across Neris river, and in the forest he found beautiful hill surrounded by the oak forests and plains; he fell in love with the site and he stayed there to live; he founded the city and named it Trakai - the place where Old Trakai were; and he moved his capital town to Trakai" (A. Baliulis, S. Mikulionis, A. Miškinis 1991). Gediminas came into power in 1316 and in 1323 already his capital city was Vilnius. Therefore Trakai could have been the capital city only in the period between 1316 and 1323 (A. Baliulis, S. Mikulionis, A. Miškinis 1991). Nevertheless regardless of how short this location

was a capital town of the Duchy, it is proven by not only historic sources, but also by the castles and their remains buried under ground and discovered here and there during archaeological excavations, to have been a very important fortification center during the period of wars with the Crusaders.

When talking about the fortification system of Trakai it is critical to note that it comprised not only of castles, but of numerous other fortifications as well. One can track two parts of fortification system - external and internal. **The External system** was formed of mounds and Tartar settlements in the surroundings. All the main roads leading to Trakai were defended (Fig.1).

In the northern part a very important defence element was **the Bražuolė mound**. This is a hill - the top site with a quadrangle shape, and sides of 60, 200, 115 and 190 meters in length. At the bottom of the hill there is a 5-10 m - deep ditch (width at the top 40-50 m, width at the bottom 5-10 m). During excavations the large - format bricks were discovered in the ends of the mounds ramparts, which would imply that in 14th- 15th centuries there could have been stone buildings (S. Mikulionis 1975).

In the eastern side between the lakes of Skaistis and Nerespinis there is **the Varnikai mound**.

In the southern part there is **Old Trakai site of the former castle**. The list of Russian Cities (1387-1392) published by M. Tichomirov indicates that the city of Old Trakai was built of stone (S. Mikulionis 1975).

The recent archaeological surveys made by archaeologist A. Kuncevičius prove the fact that the Old Trakai castle was built of stone. During there surveys the fortification walls of the castle were discovered. These were made of rather large bricks bound in accordance with baltic technique. A lot of large scale bricks (31,5 x 14 x 9 cm) were also used to build the still existing in the territory building of monastery and Neo gothic church.

The western part Trakai was protected by small lakes and swamps. Therefore, there was no need for any kind of fortifications.

Another critical part of the defense system was the **Tartar settlements**.

Tartars and Karaims were invited to Lithuania by Grand Duke Vytautas at the end of the 14th century. These nations were

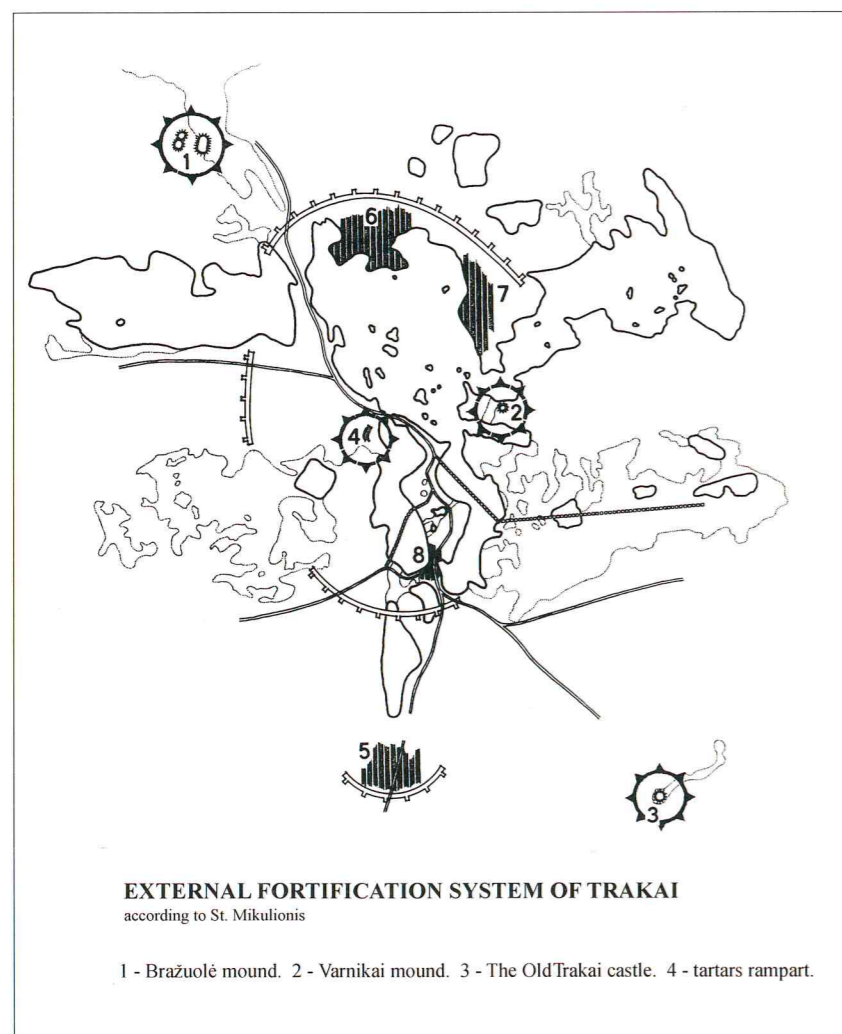


Fig.1. External fortification system of Trakai (according to S. Mikulionis)

known for their particular bellicosity and loyalty to Grand Duke. The Tartar settlements can mainly located by the existing names of localities and titles provided in the historic sources. One village near the road leading to Semeliškės is still called Totoriai (Tartars). The documents deriving from the 18th century state that the Tartars owned the so-called island of Algirdas (now a peninsular) in the northern part of Lake Galve. Currently a lot of Tartar families are still living in the southern part of the city. Almost all of

them are proud of their grandparents and ancestors living there since Vytautas times.

Trakai town and castles were enclosed in the ring of Tartar settlements (Fig. 1).

The internal city plan structure was caused by the defensive interests, or in other words the town itself was an internal system of defence.

There is an opinion that in 14th century Trakai was not a peninsular, but rather an island, or even several islands (Fig. 2). The main bastions were suggested by the land-

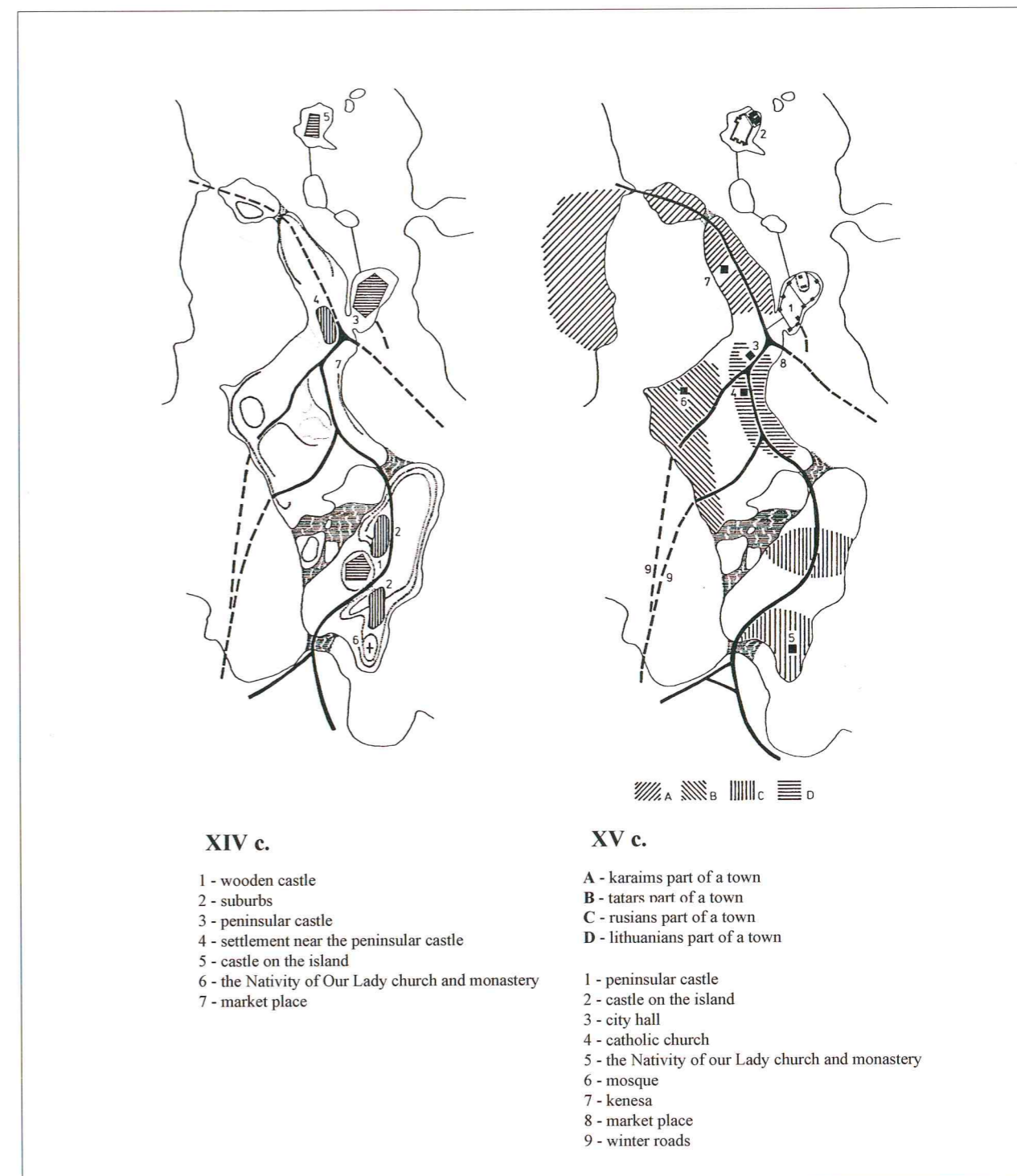


Fig. 2. Development of the Trakai town (according to A. Baliulis, S. Mikulionis, A. Miškinis)

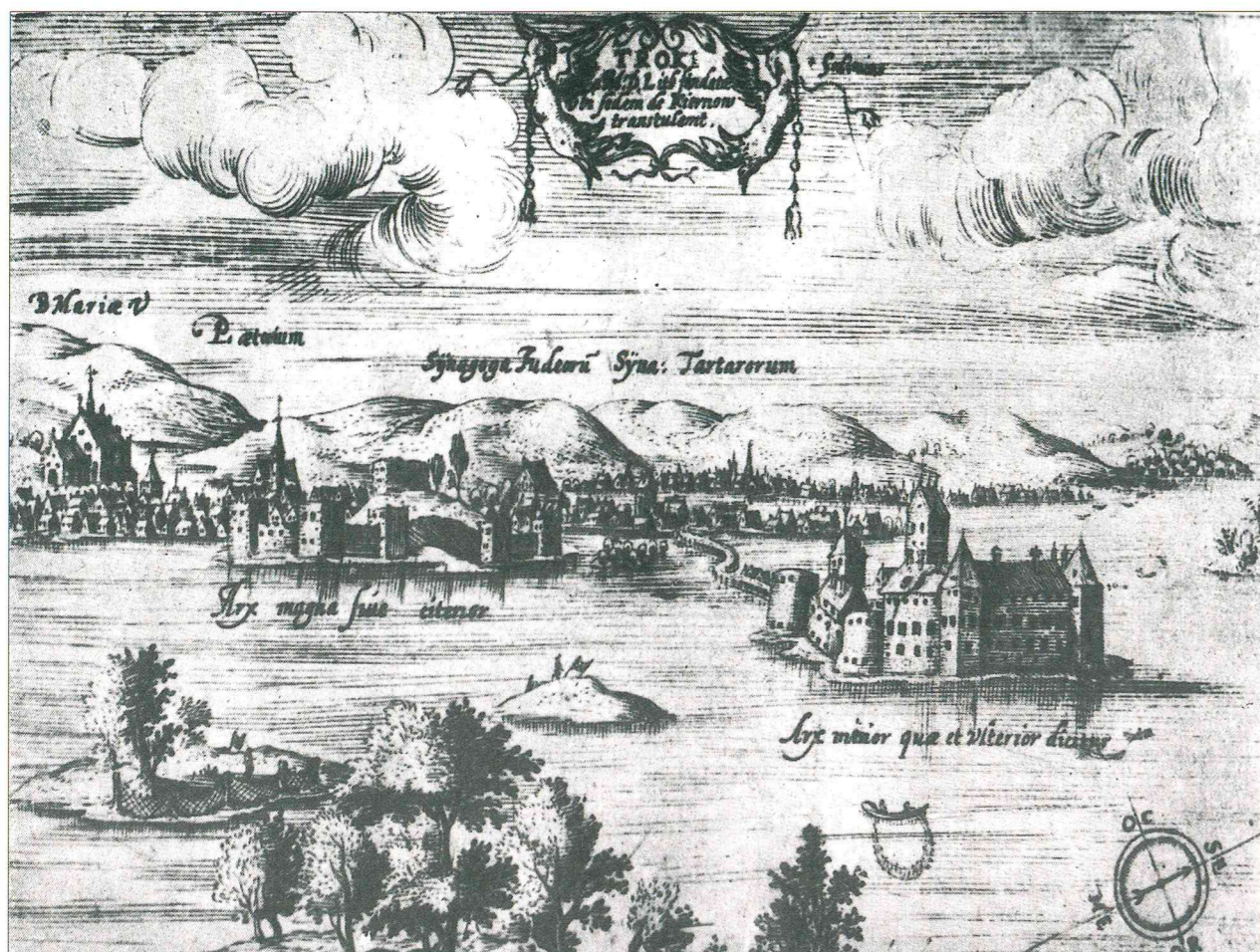


Fig. 3. Trakai town and castles in 1600. T. Makovski

scape. One can only guess the composition of Trakai internal defense system in its first stage of establishment based on the data of fragmented archaeological surveys. The remnants of wooden fortifications and ramparts were discovered in the south-west slope of the highest Trakai hill named Bernardinai hill. Researchers of Trakai make a hypothesis that the wooden castle was located here and to the North from this castle there was the suburbs of the castle.

In the second half of 14th century there were already two castles in Trakai – the peninsular and the island castle. It is still debated whether the constructions of these two castles started simultaneously, or one of them was erected earlier.

Before analysing the kernel of the Trakai fortification system, although shortly must be mentioned other elements of it – **the bridges**.

In the northern part there was the bridge between Galvė and the Totoriškės lakes, in the southern part the bridge situated at the isthmus of Bernardinu and Totoriškės lakes.

This bridge is shown in an engraving of 17th century ((Fig. 3) - author K. Shnops (A. Baliulis, S. Mikulionis, A. Miškinis 1991)).

The majority of historical sources mention Gulbė bridge as a boarder between Karaim and the

catholic city. The place of said bridge has not been located until today, but perhaps the most convincing is the hypothesis of historian A. Baliulis, which suggest that the name of the bridge derives from the Russian name "lebednoj most", which means drawbridge and which was used to bridge the peninsular castle and the town (A. Baliulis, S. Mikulionis, A. Miškinis 1991).

It is necessary to mention the bridge between the peninsular and island castle. This bridge was mentioned in the Crusader's chronicles. The remnants of the bridge were investigated in 1967 (S. Mikulionis 1975).

There is a hypothesis that Trakai churches and monasteries were located on the highest hills, fortified and built of stone were a part of fortification system. In the print of T. Makovskis we can see the church surrounded by the fortification wall (Fig. 3).

Very important elements of the internal fortification system were districts of the town, in which Tartars and Karaims lived. Tartars used to live in the Western part of a town, near the so-called Dudakalnis Hill. Modern Traku street was called Tartar street in the 19th century, and the Tartar mosque was erected on this street. The name of the Lake Totoriškės also evidences that Tartars used to live in this part of a town.

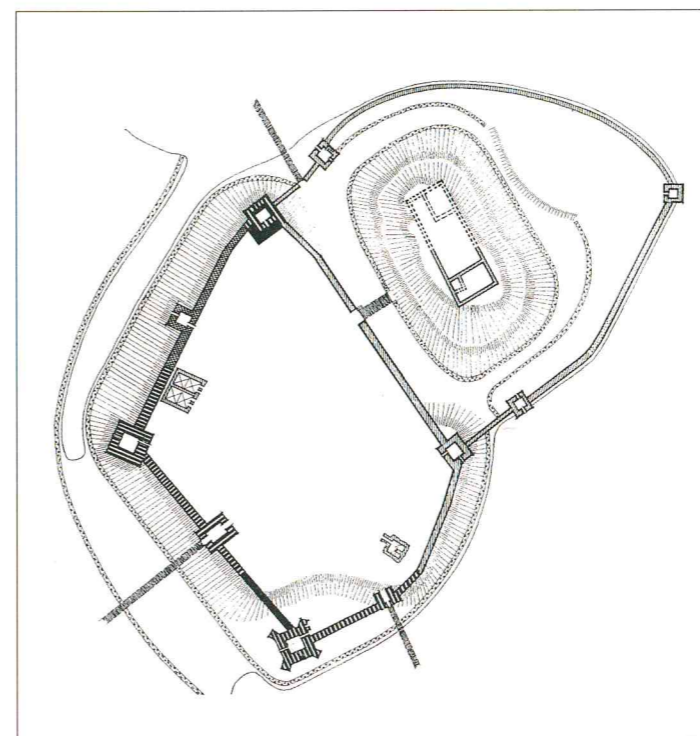


Fig. 4. Trakai peninsular castle. The stages of construction of the stone castle (according to S. Mikulionis)

In the Northern part of peninsular, which is still called the Karaim part because Karaims used to live there. They formed the last line of defence which guarded the residence of the Grand Duke in the island castle.

Talking about the fortification system of this location, it is necessary at least briefly describe the peninsular and island castles.

Almost all the 19th - 20th centuries researchers of Trakai stated that the **peninsular castle** is older than the castle on the island. Nevertheless, the data of the architectural and archeological investigations of the last decades had denied this statement. Both castles were not constructed at once and formation of both took a long time. They were demolished and rebuilt several times.

The peninsular castle was built on the cape which was separated from the town by a deep ditch filled with water. This castle had two courtyards. The front part – forecastle - was separated from the back part by the ditch which had never been filled with water. In the fore-castle, based on the recent data, there were seven fortified towers (Fig. 4). All the towers were of quadrangular shape, build of field stones and bricks. The bricks were mainly used to form the corners and edges of the windows and doors. More distinctive features of Gothic style are observed in the best preserved until today southern tower (Fig. 5). The sharp-ar-

ched windows survived in the fourth floor of the tower. There is an opinion that it was the largest and most decorative tower of the castle. The only remnants of the main gate-tower on the town side are the ruins of the ground floor walls buried under the ground. This gate-tower was finally demolished when building the Dominican church in the end of 18th century. In silhouette one can see the very interesting so-called Tower with Stork Nest, of which only the tall northern corner had survived along with the walls of the ground floor (Fig. 6).

The second part of the castle was designed to defend the buildings on the high hill, which is commonly called the Hill of Sacrifices. Three small fortified towers of quadrangle shape used to stand there connected by the fortification wall, while the ditch surrounding the hill was supported by the breast-walls.



Fig. 5. Trakai peninsular castle, southern tower (1996)



Fig. 6. Trakai peninsular castle. Tower with Stork Nest (1991)

One can trace four principal phases of construction of the stone castle

The first phase was the phase of planning to construct the "fenced"- type castle with a single huge tower in the northern part of the castle. The tower in plan had a quadrangle shape, 15 x 15 m with the walls 3,8–3,9 meters thick.

The remnants of this tower were founded under the current north-western tower in 1962 and in 1996 (A. Tautavičius 1962–64). The stone walls were demolished after the fire. It is difficult to describe precisely the building technique, but we know that the walls of the tower were built of field stones, and filled with small pieces of bricks and crushed stones.

The remains of two northern walls were used as the basements for the new Northern tower.

The remains of the defence wall from the same period were founded near the southern tower of the castle (S. Mikulionis 1975).

In 1377 Crusaders attacked new castle at Trakai, the negotiations between Duke Kęstutis and the marshal of the Crusaders, Gotfrid fon Linden, took place on the bridge between two castles. These events are described in the list of Vygand Marburger (J. Orda 1960).

The Trakai castles were attacked and demolished by Crusaders in 1382 and 1383 (S. Mikulionis 1975).

Based on these facts, we may suppose that the

first phase of stone constructions on the peninsular was interrupted by the events at the end of 14th century – the wars with Crusaders and the death of Duke Kęstutis in 1382 (A. Tautavičius 1968).

The second phase was the phase during which the plan of the front part of the castle with seven towers connected by approximately 10 m - high fortification walls. This period may be connected with the period of the Great Duke Vytautas. The time of his governing – 1395–1430, was when the Crusaders attacked Lithuania 8 to 10 times per year. He needed strong castles. Of course, in this period the great reconstruction of the main fortifications was started.

According to the archaeological research, the whole front part of the castle was erected in a very short time. This is indicated by the similarity of brick wall constructions, structures of tower design and volume, as well as the identity of architectural forms.

All the towers are of square plan. The towers of the southern side, which were especially important for defence, were larger in size (13,5 x 13,5 m), and the towers at the fosse, which separated the frontal part of the castle from the one at the Hill of Sacrifices, were smaller. The smallest were the intervening towers of the southern and northern defence walls. Their sizes on the drawing are consequently of 8,6 x 8,7 and 6,9 x 6,3 m.

Apparently, the castle was periodically attacked during its erection, partly destroyed and rebuilt again. Different brick wall constructions can be noted in different parts of the walls. Rows of large stones were reinforced with the pieces of crushed stones and brick mixture (fig. 5,6). Bricks with the following

sizes of 29–31 x 13,5–14 x 8,7–9,2 cm were used for tower edges construction as well as for window and entrance openings formation.

The third phase was the phase of completion of constructions of the front part of the castle and building of the fortification wall around the Hill of Sacrifices (Fig. 7).

Some researchers of the Trakai think that initially this part of the castle was built of wood and only later it was gradually replaced by the stone and brick walls. Different masonry constructions may prove the fact that the eastern part of the castle was constructed later than the western one. The inner surface of the defence wall is trimmed up with bricks when the core is constructed of stone rows covered with the whole and broken brick rows. We didn't find this type of masonry in the forecastle. Bricks are of 27,5–28 x 13–13,5 x 8–8,5 cm in size.

The fourth phase involved the construction of the buildings on the Hill of Sacrifices, which might never had been accomplished.

This is the phase when the appearance of the Gothic decorative elements might be found in the peninsular castle. During the archaeological excavations of 1992 and 1993 lots of nervure bricks were discovered at the Hill of Sacrifices (B. Lisauskaitė 1992). Unfortunately, no constructions of that period remained above the ground of the peninsular castle. Whenever underground researches were carried out very fragmentary.

Having briefly described the peninsular castle we approach the main object of the Trakai fortification system - **the castle on the island** (Figs. 9–12).

The castle stands majestically out on an island in the Galvė lake, which is called the Island of the Castle. The archaeological excavations showed that at the beginning of the construction these were three islands. One island was situated within the limits of the current central palace, forecastle and the northwestern tower, the second one under the current southwestern tower and the third one under the southeastern tower. That the castle was built on three islands is also supported by the fact that the level of the water in the lake in the period of castle construction was around 1 meter higher than today (S. Mikulionis 1975).

The constructions of the castle started from the highest island. In the first phase it was planned to build a "U" shaped palace and the yard in the forecastle. The fragments of the said phase survived in the walls of the right wing of the central palace. The stone part of the castle reached as high as the second floor window-sills. The discovered in the seams remnants of the soot, crumbled off bricks suggest that the walls after the construction started were burnt down (S. Mikulionis 1975).

In the second phase of construction the central palace of the castle was built and, perhaps, a part of the surrounding fortification walls. The plan of the castle had changed essentially - the forecastle and the third building in the courtyard were rejected. The cellars built in stone during the first phase were reconstructed and the construction of donjon was launched. It is obvious that a part of donjon and the third floor of the right wing were altered later. This



Fig. 7. Trakai peninsular castle. The ruins of small the northern tower (1991)



Fig. 8. Trakai peninsular castle. The ruins of the defence wall (1991)



Fig. 9. Trakai castle on the island

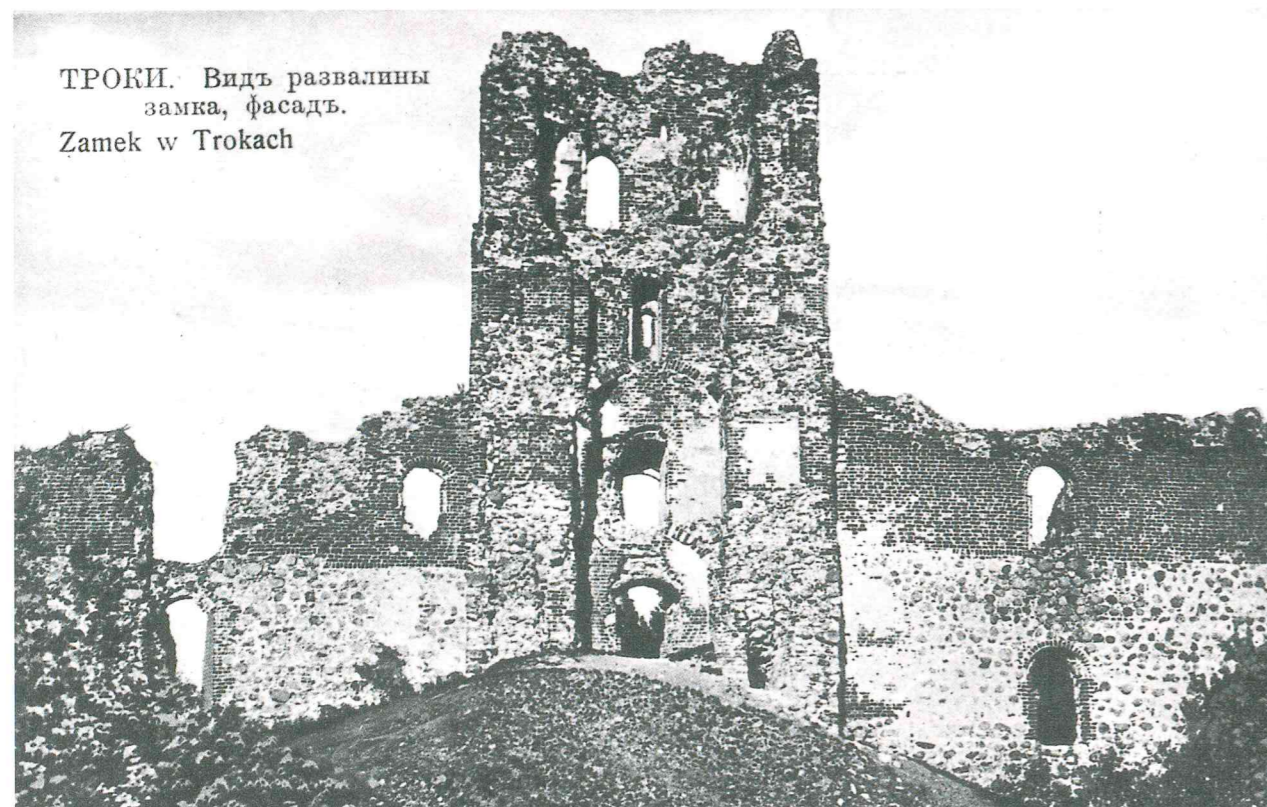


Fig. 10. The ruins of Trakai castle on the island at 1923

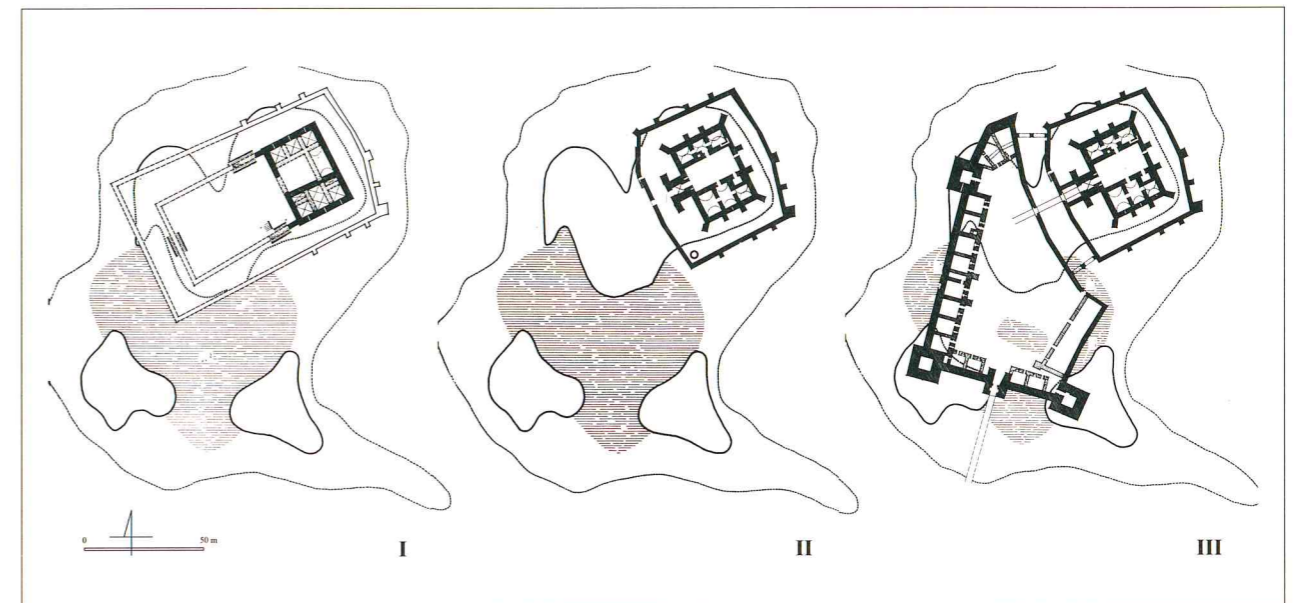


Fig. 11. Trakai castle on the island. Stages of construction (according to S. Mikulionis)

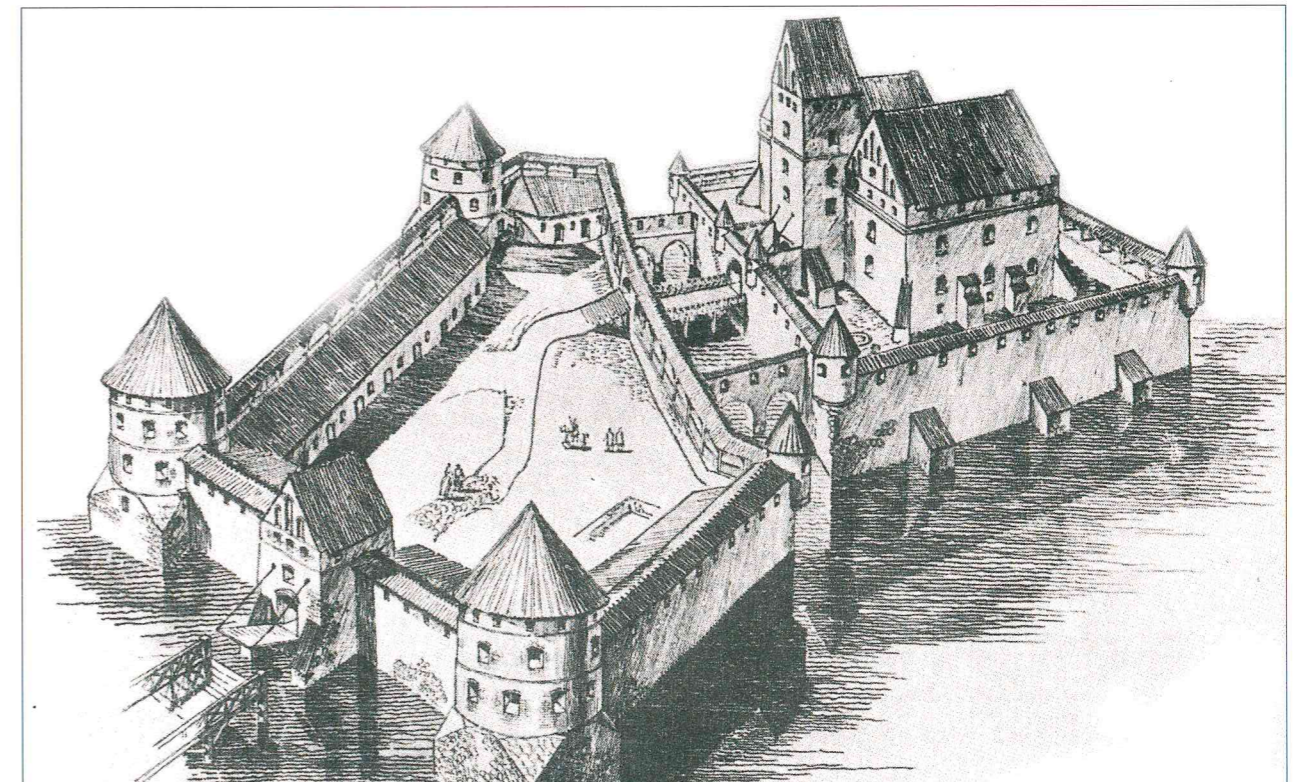


Fig. 12. Trakai castle on the island. Project of reconstruction (author B. Krūminis)

phase of construction is interesting because the sizes of bricks (27,0 x 13, 5 x 8,0 cm) and the triangle corrugation of the seams are the same as in the penultimate construction phase of the peninsular castle (S. Mikulionis 1975).

The architectural composition of the castle is dominated by the five-storey donjon in the centre of the facade of the central palace with parameters in the plan of 9,2 x 9,6 m. The Donjon contains the entrance

ce was covered from the side of the the castle by the draw-bridge. The premises of the first and the second floors were covered with cylinder vaults; a wooden beam ceiling covered the fourth floors, and the fifth floors was covered by the star vaults.

The central palace comprised of two three-storey buildings and an internal courtyard of 11,5 m in width and 21 m in the length connecting them. The cellars are covered by the cylinder vaults, and other floors are

mainly covered by star vaults. The main hall is a special premises which is covered by the nervure vaults, while traces of the polychrome and wall painting remnants of frescoes can be observed on the walls.

The forecastle was constructed in the third phase, the dynamics of which developed as follows: first of all the towers with fortification walls, then western casemates and finally the eastern ones. This part of the castle was constructed in the lower islands, mainly in the peat area. Here and there the foundations were put directly into water therefore, a specific wooden construction was put under foundation. The towers were erected in the most convenient highest points of the islands. The forecastle comprised of the four massive towers. The ground floors have a quadrangle plan with rounded upper floors. Only the central tower over the entrance gate has quadrangle shape in all the floors (10,4 x 11,45 m). This tower had a draw - bridge .

The Western casemates have two-storeys. The premises of the first floor were covered by the wooden beam ceiling, and the premises of the second floor were covered by the nervure vaults.

In the third phase the construction of the castle was essentially accomplished. Just the southern casemates and small triangles were built a little later (S. Mikulionis 1975).

It must be mentioned that the round shaped towers in the forecastle of Trakai castle on the island were used as fence against the mass cannon fire

which was the latest stage in the construction of Lithuanian fortifications (S. Mikulionis 1975).

This story is just a short excursion through the unique surroundings of Trakai town. It is only one version of the medieval fortification system, mainly based on the material collected by the architect S. Mikulionis, one of the authors of restoration projects of Trakai castles in 1960–1990. The further research, we hope, will provide additional data .

Conclusions

1. In 14–15 century Trakai was one of the best fortified strongholds of the Great Principality of Lithuania.
2. The kernel of Trakai fortification system – two stone castles were surrounded by other elements – bridges, Tartar and karaims settlements, mounds.
3. Both castles were not constructed at once and formation of both took a long time. They were demolished and rebuilt several times.

Authors of drawings - B. Krūminis, S. Mikulionis, A. Steponavičius.

Authors of photos - M. Sakalauskas, A. Steponavičius, G. Filipavičienė

Jonas Glemža

MEDININKAI CASTLE

Die Burg Medininkai

Die Burg Medininkai aus der Zeit um 1300 ist das älteste gemauerte Architekturdenkmal in Litauen. Diese Burg entspricht dem Kastelltypus und ist das grösste Exemplar unter den anderen Burgen der LDK (Kauno, Kernaves, Lydos) Burgen.

Die Burg besteht aus einem viereckigen Hof (1,8 ha gross), die Mauern haben eine Höhe von 15 Metern und bestehen aus Rollsteinen mit Ziegelstreifen. Die 567 Meter lange Umfassungsmauer besitzt vier Türme. Die Mauern der Burg und die Reste der Türme hat man seit 1954 zu untersuchen und konservieren begonnen.

1991 wurden die Arbeiten wieder aufgenommen, und jetzt sind alle Umfassungsmauern konserviert. 1993 hat man beschlossen, den fünfgeschossigen Donjon wiederaufzubauen, von dem der erste Stock und eine Ecke in der Höhe der fünf Geschosse erhalten war. Das Donjon wird mit Unterbrüchen wiederaufgebaut, jetzt sind etwa 40% der Arbeit gemacht. Die Bauten sind vom Staat finanziert, der amerikanische Litauer Architektur- und Ingenieur-Verband half freiwillig. Die Burg ist ein wichtiges Objekt für den Tourismus in Litauen.

Jonas Glemža

*The State Commission for Cultural Heritage Protection
Rūdininkų 13, LT-01135, Vilnius, Lithuania*