

Cartography as a source for the medieval fortifications of Šibenik

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Abstract

Unlike the well-documented and almost fully researched Šibenik fortifications constructed in 16th and 17th century (St. Nicholas' Fortress, St. John's Fortress, Barone Fortress), the evolution, direction and spatial extent of earlier Šibenik fortifications have not been fully unraveled. St. Michael's fortress (*castello*) above the city, which has been occupied since pre-Roman era, was extensively rebuilt by the Venetians in early 15th century. The city walls, descending from the fortress to the sea, were only completed in the second half of 15th century - we have no information about any early versions of the walls, although they surely existed. Two forts on the inner, eastern side of the channel linking the Šibenik harbour to the open sea were also considered a part of the medieval fortification system. Considering the limited number of written historical sources, the existence of several cartographic representations of Šibenik from the late 15th and early 16th century (Konrad von Grünenberg's 1486 veduta, and Venetian map of central Dalmatia from c.a. 1510, among others) is of particular value. Despite their different provenance and character, a detailed analysis of these graphic sources can offer some (but not all) answers to many open questions regarding the pre-bastion defence of Šibenik.

Keywords: Šibenik, Dalmatia, cartography, fortifications.

1. Introduction

After a great victory near the mouth of the Tiber, which opened the war against Genoa (and its ally, Hungarian king Louis of Anjou), Venetian admiral Vettore Pisani sailed to Dalmatia in late summer of 1378, sacked the city of Kotor, and then in October arrived before Šibenik. According to much later sources, the Venetian legation demanded the surrender of the city, and the people of Šibenik replied that "surrender can only be enforced with sword, not with words" (Grubišić, 1986). Pisani proceeded to do exactly what the locals suggested, attacking the city, conquering it and setting it on fire. A part of the population fled onto the fortress above the city, today's St. Michael's Fortress, which Pisani had no interest in conquering. Few years later, a new fire damaged numerous public buildings in the city centre. These unfortunate events caused the destruction of all earlier archival documents

about Šibenik, putting the researcher of today in an ungrateful position. Three centuries of historical events, biographies and spatial development had to be reconstructed on the basis of scattered and scarce data from other archives, archaeological research or architectural details.

Established under a pre-Roman and late antique fort, Šibenik developed in the early Middle Ages as a trading point. Like other larger cities of the eastern Adriatic, by the early 14th century it had developed communal administration and avoided the fate of being a traditional feudal estate (Zelić, 1999). In 1412, after a three-year siege, Šibenik placed itself under the protection of Venice by signing a rather favourable contract (Kolanović, 1995). In later centuries, Venice, with local support, built new fortifications which defended Šibenik from the sea side (St. Nicholas Fortress in mid-16th century) and the land side (St. John's

Fortress, Barone Fortress, bastion-type defence of the western and eastern approaches to the city, all in mid-17th century).

These new fortifications are adequately treated in the (primarily recent) literature (Čuzela, 2005; Žmegač, 2009; Žmegač, 2014; Glavaš, Pavić, 2016; Glavaš et al., 2018; Glavaš, Pavić, 2023; etc.), but much less is known about the older walls. Only a few pieces of information are available from historical sources, such as the fact that Šibenik did not have seaside walls in 1333. The oldest historical monument in Šibenik, St. Michael's Fortress is today preserved and presented as a fortification complex (Fig. 1), with a towering castle (shaped as an irregular rectangle) surrounded by lower fortification levels. The castle has two square towers (dated approx. in 13th-14th century), and two polygonal 15th-century towers in the northeast. The approach to the castle is protected on three sides by *faussebrayes*. The fourth, northwestern side has a spacious place-of-arms, and a detached polygonal tower to the north. This place-of-arms is connected with the coastline with a 60-m long escape route (*strada di soccorso*).

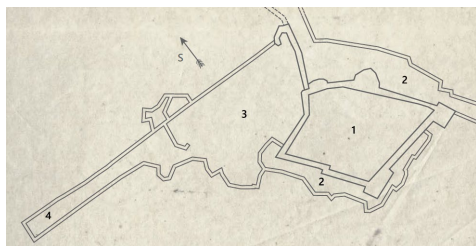


Fig. 1- The layout of St. Michael's Fortress in Šibenik; 1 - castle; 2 - *faussebrayes*; 3 - place-of-arms; 4 - *strada di soccorso* (Pavić, 2021).

Archaeological research at St. Michael's Fortress were conducted from 1972 to 1977, and again from 1990 to 1996. However, the research results were never published, and the preserved documentation is extremely deficient. The current outlook of the fortress is a result of many not fully successful conservation and restoration interventions made from the end of the 1980s to 2014 (Glavaš, 2020). A similar approach was applied for the lines of city walls, both fully preserved and the ones in fragments. For example, no archaeological research was conducted during the reconstruction of the "Old marketplace" under which lies 200 meters of ramparts. These works, very casually monitored

by conservation officers, resulted in a low number of findings and the current inadequate level of presentation. The only published research was carried out on some segments of the southeastern city wall (Pavičić, 2001).

In these circumstances the research has to be reoriented toward the written and graphic historical sources. Most of them have already been published and studied, but many new ones have been recently uncovered. Particularly interesting ones are the graphic depictions of Šibenik, the first of which were made in the late 15th century.

1.1. Grunenberg's Maps (1486)

The two manuscripts in which Konrad von Grunenberg, a German knight, described his pilgrimage to Jerusalem are very similar, with only minor differences in the content and in the vedutas of the cities (Petrić, 1983). It is generally considered that the shorter edition from Karlsruhe is slightly older, and the longer edition from Gotha slightly newer. According to Grunenberg, when the ship anchored due to bad winds, some of the pilgrims went on a trip to nearby Šibenik, where they were welcomed by the Venetian count and some noblemen of Šibenik (Kužić, 2013). They visited the Cathedral and had dinner in the count's palace and then returned to the ship.



Fig. 2- Konrad von Grunenberg's Karlsruhe map (Badische Landesbibliothek).

The Karlsruhe map (Fig. 2) depicts Šibenik on one vertical page, with the city's coat of arms (a hand holding a dagger) in the upper left, and the inscription *Sibenek die hobstat im kungkrich dalmatzien* in the upper right corner. The city has an oval shape, and is surrounded by walls. Veduta is dominated by St. Michael's Fortress, set on a hill within the city walls, with a green zone separating the fortress from the rest of the settlement. The fortress' architecture is somewhat unclear - the entrance tower is accessed via the road from the city, and the citadel, i.e., the castle can be accessed through two lower fortification levels. A total of six towers - four square ones and two semi-circular - were made in these lower levels. All the towers and the connecting curtains have a crenellation, and semi-circular towers are drawn with a teardrop-shaped loophole. The leftmost tower has an upper level with a roof. Considering the frame, the entrance tower was probably located next to today's St. Anne's church on the eastern slope of the fortress. This complex is also shown in Kolunić's 1571 veduta *Il fidelissimo Sibenicho* (albeit in somewhat more modest dimensions), and it is well-known that it was the endpoint of the path from the city centre to the fortress. The high castle walls at the very top of the hill have four towers and another larger building (barracks?) within. The leftmost tower of the castle, with a red roof, a flag and six arrowslits, is also the largest, and the upper floor is wider than the rest of the tower, obviously suggesting machicolation.

City walls descend from the fortress to the right and left towards the coast. They are drawn in a simple fashion, without a crenellation, and with two simple square towers in each line. The zigzag part on the left line, right next to that large castle tower, is probably the beginning of the *strada di soccorso*, which looks similar even today (Bilić et al., 2019). Apart from the fortress and city walls, the only buildings that can be easily recognized are St. James' Cathedral (which is even described in the manuscript), and the bell tower of the Franciscan church and monastery on the far right. The complete absence of coastal city walls or coastal towers is slightly puzzling - many buildings on the coast are separated from each other, with many gates or paths leading towards the interior. Like the green zone at the foot of the fortress, the terrain right next to the descending city walls is also without buildings.

Two smaller forts (towers) are shown at the base of the veduta. They were located at the eastern ends of St. Anthony's Channel, which connects the harbour of Šibenik with the open sea (Glavaš, Šprljan, 2018). The left one (on the northern side), which is still partially preserved today, has a coastal round tower with a long crenellated curtain leading towards the land, all the way to the square tower in the background. Inside the curtain is a slightly larger central tower (donjon?), and another larger object is set within the curtain wall. The fort on the right (southern side) consists of a very large roofed building and a meandering line of walls surrounding it.

On the other hand, the veduta from Gotha (Fig. 3) provides much more detail, and that on two pages. In the upper left corner, there is again a coat of arms, mirrored in relation to the one from Karlsruhe. At the top, the name of the city (*Sibeneck*) is written inside the cartouche.



Fig. 3- Konrad von Grunenberg's Gotha map (Forschungsbibliothek Gotha).

The city is again depicted in an oval shape, as if it were an island (?!). St. Michael's Fortress, set again on an isolated hilltop, is somewhat less dominant due to the horizontality of the display as well as much greater number of buildings within the walls. The fortress is accessed again with a road from the city that leads to a smaller barbican in front of the strong entrance tower with a prominent machicolation. One semicircular and one square tower are on the left side, and two semicircular and one tall square tower on the right side of the entrance tower. A wooden corridor connects the tall square tower with a large building (barracks) within the castle walls. All towers and connecting curtains have crenellation, and some of the towers are roofed. There is a visible pathway between the entrance tower and the castle. Apart from the barracks, the castle has three more square towers and a polygonal one.

Another large building is placed on the left side of the castle, with residential-style windows, but the highest, wooden floor has a crenellation and machicolation.

The city walls towards the mainland, so clearly depicted on the Karlsruhe map, are on this veduta almost completely covered by residential buildings. Only the peaks of three towers on the right and two on the left are visible. The seaside walls are drawn in their complete line, without open corridors/streets leading towards the interior. Two semicircular and one larger square tower with a crenellation and machicolation are shown inserted into the seaside wall. It is visible, however, that parts of the seaside city wall have been swallowed up by residential buildings, which everywhere leans against the walls, and occasionally even crosses them from above. The other buildings which can be recognized are St. James Cathedral, and the Franciscan bell tower next to the St. Francis Church depicted with tall Gothic-style windows. Cathedral's bell tower, actually the medieval Teodošević tower, is located on its left side. The picturesque veduta is enriched by the city's inhabitants performing various daily activities on the shore in front of the coastal wall - such as guarding, trading, sawing wood or just strolling around and talking with each other.

As in the Karlsruhe map, the lower segment of Gotha map shows two forts on the edge of the channel, which have grown here to significant proportions. The left fort thus has as many as seven towers and a larger building within the curtain. One of the towers has a small wooden guardhouse with a ladder leading to it, while the other has a Venetian lion on its facade. The right,

even more elaborate fort is set on the rocky cliffs. It is accessed by a path that leads to the barbican entrance with a drawbridge. The fort consists of a central building, with an almost residential appearance, surrounded by crenellated walls. A prominent round crenellated tower with a machicolation is set on a slightly distant cliff, connected to the fort by a wooden corridor.

1.2. Map of an unknown author, ca. 1505-1510 (K-1)

This detailed map (Fig. 4), which was created for the Venetian military (Juran et al., 2019), shows central Dalmatia, with a focus on Šibenik and its surroundings, but going as far towards the hinterland as Grahovo and Livno in today's Bosnia and Hercegovina. The military provenance also explains the extreme precision with which this map records the Šibenik fortifications. Šibenik is drawn in a pyramidal shape, as it really looks like this from the seaside.

St. Michael's Fortress, on a steep hill above the city, is shown with four roofed towers, and another high tower on the right side where the city walls begin. Two towers seemingly facing the coast are connected by a high curtain and additionally surrounded by a lower level of fortifications - the *faussebraye*. A staircase and an entrance are drawn between them. From the left (western) tower, the walls extend in two directions towards the coast. A diamond-shaped courtyard formed the place-of-arms, which today is a part of St. Michael's Fortress. The outer line encircles the coastal suburb of Šibenik (*Borgo di Mar* or *Dolac*).

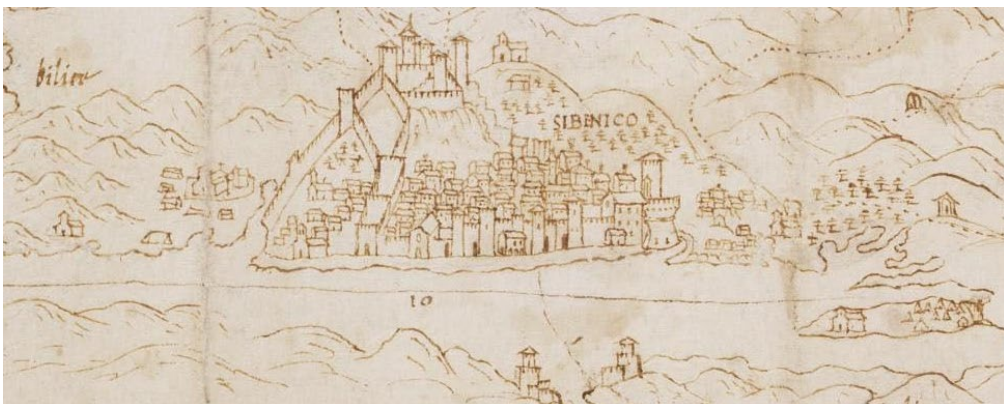


Fig. 4- Map of the unknown author, ca. 1505-1510, detail (Juran et al, 2019).

This wall, today known as *Dolac wall*, was constructed in the late-15th century (Pavić, 2022). The second line represents the „dual rampart“, or *strada di soccorso*, an escape route still connecting the fortress to the coast. This fortified corridor is formed by two parallel walls and three transverse ones. All the walls leading from the fortress are crenellated.

The city walls towards the mainland, which start with the previously mentioned high tower, cascade down to the right, following the terrain. One (or two) more tower can be seen at the bottom of the cascade, but the rest of the mainland wall is obscured by residential architecture. A very distinct round tower on the far-right corner of the city has several architectural details signifying a typical 15th century fortification (machicolation, cornice, scarp, firearm loopholes). In its background there is a high St. Francis tower. Like in the Gotha map, this one also shows Šibenik seaside wall in a full line from the elaborated round tower all the way to *strada di soccorso*. Two non-military objects were built into the wall, a residential (?) building directly next to the round tower and, at the other end, the church of the Dominican monastery. Between them, there are five towers and four gates. Two objects were added at the foot of the seaside wall, certainly used for commercial purposes. Interestingly enough, no individual civilian buildings such as cathedrals, churches or palaces are shown within the city walls, with the exception of the aforementioned Dominican church within the seaside wall.

The forts in St. Anthony's channel, on the other hand, are shown somewhat simplified, almost mirror-like. Both have a central fortified building with a smaller tower on the roof, and lower wall or other fortified structure descending towards the shore.

1.3. Matteo Pagano's map (published in ca. 1530)

Until recently considered the oldest detailed post-Roman depiction of Dalmatia, this map (Fig. 5) was printed by (not created by!) Matteo Pagano in Venice in 1530 and was a template for numerous later maps throughout the 16th century (Faričić, 2007). Pagano's map is not valued for its great precision - toponyms or locations are sometimes mistaken for each other, and numerous fortifications are shown schematically.

Šibenik (*Sebenicho*) is also depicted somewhat generalized, with fortifications in an oval shape similar to Grunenberg's drawings. Vrana, Nin, even Skradin or Pag are shown in a very similar way. St. Michael's Fortress is at the top of the city - two square towers connected by a curtain wall are surrounded by a lower fortification, the *faussebraye*. In this lower level, on the right side, there is a gate from which a path leads to the city. Nine towers were randomly inserted into the oval line of the city walls. Distinct fortification structures (*strada di soccorso*, Dolac wall...) are not recognizable, nor are the civil buildings within the walls. The residential buildings on the left side of the walls probably indicate an unprotected coastal suburb, which could mean that this image of Šibenik was created several decades earlier, before the construction of the Dolac wall. Nevertheless, the simplified level of depiction makes it impossible to draw firm conclusions. A similar conclusion could be made for the outlook of the forts in St. Anthony's channel, shown here simply as towers surrounded by lower walls.



Fig. 5- Pagano's map, ca. 1530 (Faričić, 2007).

2. A short comparative analysis

Since the establishment of their rule in 1412, up until the end of the 15th century, the Venetian Republic more or less continuously invested in the construction and renovation of the defensive system of Šibenik, which - just like before the arrival of the Venetians - consisted of the fortress above the city (*castello*, today's St. Michael's Fortress), city walls and two forts at the eastern entrance to St. Anthony's Channel (Bilić et al., 2023). Due to the lack of historical sources and archaeological results, it is not possible to reconstruct the appearance of the castle and the

extent of the city walls in previous centuries. A partial and extremely careful reconstruction is only possible with the appearance of the first graphic sources (made in approx. 1480-1530) and their comparison with later sources, especially with numerous layouts of Šibenik fortifications made in the mid-17th century.

The important research questions are which of the graphic sources should be prioritized and a similar topic of understanding the purpose of the source and the intention of its author. For example, of the two Grunenberg maps, it would be logical to consider the one from Gotha as more reliable, due to the greater number of details, many of which provide accurate information. The Gotha drawing shows the seaside wall and St. Francis Church, both of which certainly existed. However, regarding the appearance of the castle, i.e., St. Michael's Fortress, the preference must be given to Karlsruhe map, due to a very plain reason - the German knight was in Šibenik for only a few hours. He saw the coastline and main sights of Šibenik from up close and could easily remember them afterwards. However, he did not visit the castle above the city, which is also not visible from most of the coastal line under the walls, nor from the majority of city streets. He could only sketch the castle within a short period while sailing from St. Anthony's Channel to the pier in Šibenik and back.

But Grunenberg's vedutas are casual, almost touristic documents which - like his manuscript - conveyed a personal impression and emotion he experienced in a certain place. Pagano's map of northern Dalmatia is also somewhat perfunctory, with the primary purpose of showing the general geography of a wide area. In contrast, the K-1 map provides very little detail other than military ones, since that was the primary reason it was made. This is why it is the most relevant one for the depiction of fortifications. We can follow the same trend with maps from the second half of 16th or mid-17th century. The vedutas of Šibenik, even if they depict factual and easily verifiable events (such as the siege of the city in 1647), are aspiring to achieve a completely different visual and emotional experience compared to the numerous plans or layouts of Šibenik fortifications from that period (Pavić, 2019).

Therefore, regarding the fortifications of Šibenik, we will rely only on the basic information from the drawings of the German knight, as well as

Pagano's map. St. Michael's Fortress certainly consisted of a castle/citadel with several strong towers and lower walls which protected the entrance from the direction of the city. Šibenik was surrounded by walls towards the mainland, and the seaside walls were not particularly strong - they had many gates and passages and the coastline was extensively used for economic activities. The forts in the channel had great strategic value, but we will remain sceptical about their size and their allegedly elaborate architecture. Specifically, the remains of the northern fort today occupy a little more than 600m², which is only about 10% of the total area of St. Michael's Fortress. We will give some more credence to the military K-1 map, since it provides a number of credible details related not only to Šibenik fortifications. K-1 also shows St. Michael's Fortress in two aforementioned levels, with precise lines of walls surrounding Šibenik. Fortification lines and structures - including the gates - are not only realistically depicted but probably drawn in exact number. This is also the first graphic source which confirms the existence of the Dolac wall, the architectural layout of *strada di soccorso* and even some minor details such as the wall that formed the place-of-arms of the fortress.

3. Addendum - the case of the missing tower

Separately, as a sort of unsolvable epilogue, the possible existence of a large western tower at St. Michael's Fortress will also be examined. Both Grunenberg drawings show the castle's western tower as the largest and strongest fortification structure in Šibenik. In the Gotha map, the building on the western side - and it is not entirely clear is it a tower or even a very large building - occupies almost half of the area of the castle. Even in later representations - i.e., Kolunić 1571 veduta (Fig. 6), the western tower is clearly the largest one.



Fig. 6- Martin Kolunić Rota, *Il fidellissimo Sibenicho*, 1571 (Šibenik City Museum).

However, no trace of such architecture was found in many years of archaeological research or other later interventions on the western corner of St. Michael's Fortress (for example, the 1990-96 archaeological campaigns were concluded with a three-page textual report, without any drawings or layouts). Even the first plans and layouts from the mid-17th century - although they depict, for example, a southern or eastern square tower - show only a sharp corner on the position where the bulky western tower should have stood (Fig. 7).

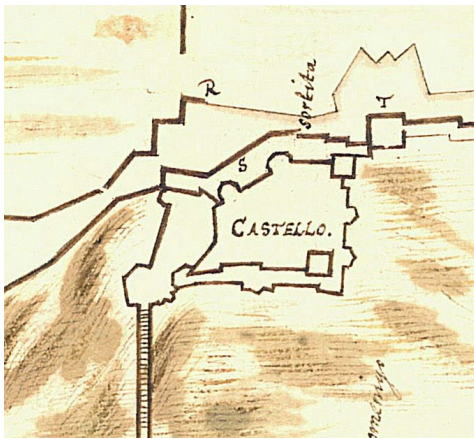


Fig. 7- Giovanni di Namur, *Il vero disegno di Sebenico nel tempo della attacco il 7 ottobre 1646* (Bilić et al, 2019)

Several possible explanations can be offered - was there a large administrative building or maybe barracks which did not protrude beyond the line of the curtain wall, but which seemed like a tower from the harbour of Šibenik? Was an earlier tower demolished at the beginning of the 17th century, or perhaps in a gunpowder explosion in 1663, and not a trace of the stone line or mortar fragments remained? Even the otherwise reliable K-1 map does not help in this situation - the tower at the top of the „diamond“ may very well be the western tower, but today's layout of the fortress suggests that this tower it is more likely a smaller polygonal tower on the northern perimeter of the walls (Fig. 8).

Can it be a simple case of a (repeatedly) distorted perspective, by which the Kolunić's large western tower would be the northern polygonal tower (Fig. 9)?

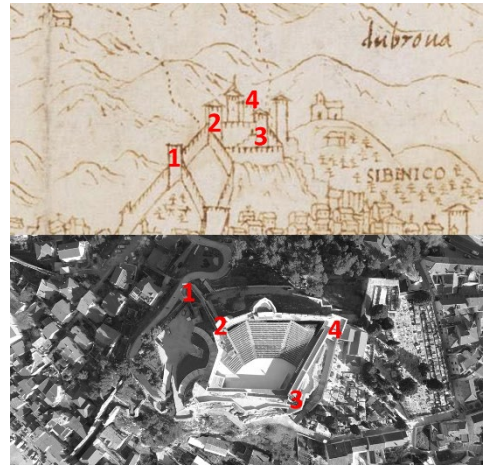


Fig. 8- One possible explanation of the fortress' layout on the graphic source (lower image: Fortress of Culture Šibenik).

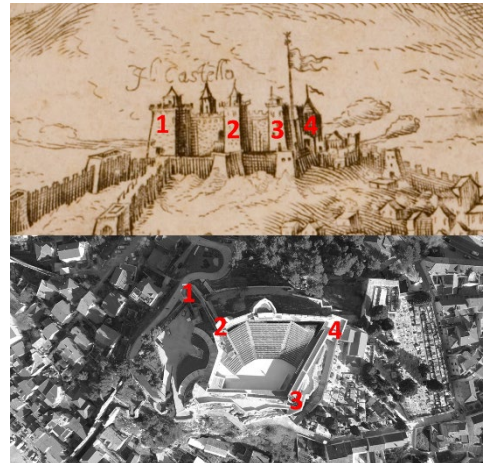


Fig. 9- Another possible explanation of the fortress' layout on a different graphic source.

The case of the missing tower will be hard to crack, but the potential discovery of new written and especially graphic sources will surely provide material for new studies and theories.

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