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## ARCHEOLOGICAL FINDINGS WITHIN THE HISTORIC NUCLEUS OF THE CITY OF DUBROVNIK

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ABSTRACT: This article deals with archeological research and finds discovered over the last twenty years on various sites within the walled area of the City of Dubrovnik. Recent evidence has thrown doubt on the traditional historiographic interpretations concerning its origin and urban development, and since further relics are continually being discovered, more will undoubtedly come to light.

The probes and systematic archeological investigations carried out within the perimeter of Dubrovnik's historic nucleus over the last twenty years—that is, after the 1979 earthquake, have resulted in a considerable number of archeological findings that cast a profoundly new light on the multilayered origin and development of the city of Dubrovnik, contrasted with the earlier traditional historiographic interpretations.<sup>1</sup>

The most recent archeological results should be approached comprehensively in order to present the unearthed buildings in their full historical context. By placing emphasis on such an accord, evidence on the recently discovered church

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<sup>&</sup>lt;sup>1</sup> See a survey in Željko Rapanić, »Arheološka istraživanja nakon potresa i počeci Dubrovnika«, in: *Obnova Dubrovnika 1979-1989*. Dubrovnik: Zavod za obnovu Dubrovnika, 1989: pp. 339-345.

buildings, their older historical layers, as well as the previously unknown fortification structures should be added to the movable finds (coins, Roman tombstones), which represent the oldest material remains found within the city perimeter to date.

Archeological excavations carried out under the Baroque cathedral and *Bunićeva poljana* by J. Stošić between 1981 and 1987 have thrown considerable doubt on the interpretations submitted by traditional historiography. Several new structures were discovered, contributing to the evidence on the Romanesque cathedral, Gothic belfry/baptistery and medieval houses. Unlike the mentioned findings which, more or less, have been recorded in archive sources, the finds of a late antiquity castle, pre-Roman three-apsidal basilica with narthex, *memoria*, as well as the graves which belong to these time frames, cannot be traced in written sources. Exceptionally, Miletius' medieval versed chronicles describe the transfer of relics of SS Zenobius and Zenobia to the shrine of the cathedral of St Mary in 1012.<sup>2</sup> The discovery of a late antique castle and the first cathedral of the city of Dubrovnik has drawn considerable attention of all scholars seeking answers to the origins of Dubrovnik (figures 1 and 2). This reopened many questions, and accordingly, provided new hypotheses on its beginnings or revised the old ones.<sup>3</sup>

Interestingly, the finds of pre-Roman money on this site, which represent the oldest material remains found within the city's historic nucleus, have been ignored by the scholarship. The coins are of Illyrian and Hellenistic provenance, dating from the third or second century BC., and any speculation about the accidental character of this deposit is best refuted by their number—15 in all. In addition, 80 pieces of Roman coins dated between the first and fourth century have been discovered, as well as 170 Byzantine coins dated between the sixth and fourteenth century.<sup>4</sup> Besides these numismatic finds, the remains

<sup>&</sup>lt;sup>2</sup> For details see Josip Stošić, »Sažeti prikaz istraživanja, nalaza i problema prezentacije pod katedralom i Bunićevom poljanom u Dubrovniku«. *Godišnjak zaštite spomenika kulture Hrvatske* 12 (1986): pp. 241-247; idem, »Prikaz nalaza ispod katedrale i Bunićeve poljane u Dubrovniku«. *Izdanja Hrvatskog arheološkog društva* 12 (1988): pp. 15-38; idem, »Istraživanja, nalazi i problemi prezentacije pod katedralom i Bunićevom poljanom«, in: *Obnova Dubrovnika 1979-1989*: pp. 326-335.

<sup>&</sup>lt;sup>3</sup> Željko Rapanić, »Marginalia o 'postanku' Dubrovnika«. *Izdanja Hrvatskog arheološkog društva* 12 (1988); pp. 39-50.

<sup>&</sup>lt;sup>4</sup> Ivan Mirnik, »Numizmatički nalazi u Dubrovniku (prethodni izvještaj o bizantskom novcu)«, in: *Etnogeneza Hrvata*, ed. Neven Budak. Zagreb: Matica hrvatska, 1996: pp. 169-177; *idem*, »Nalazi antičkog novca u Dubrovniku«. *Dubrovnik* N.S. 8/4 (1997): pp. 248-258.



Figure 1. Central apse of the pre-Roman basilica with the fragments of wall paintings depicting the Apostles

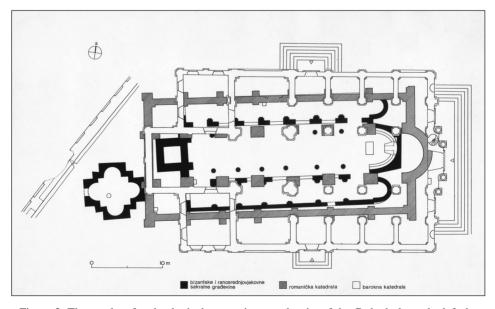


Figure 2. The results of archeological excavations on the site of the Cathedral; on the left the remains of the late antique castle (drawing by Ivica Tenšek)

of four Roman gravestones ought to be added to the evidence. The cited discoveries refute the previously held assumptions according to which earlier finds in the City area, dated in the antiquity and late antiquity, were transferred to Dubrovnik from the nearby Cavtat (Epidaurum) by Ragusan Humanists and their Renaissance passion for collecting antique artefacts.<sup>5</sup>

The submitted material evidence leads to a conclusion on a much earlier origin of Dubrovnik than that held by traditional historiography, the latter being primarily based on the information provided by the Byzantine writer and emperor Constantine Porphyrogenitus in his work *De administrando imperio*, dating the foundation of Dubrovnik in the first decades of the seventh century.<sup>6</sup>

Archeological excavations on the site of *Bunićeva poljana* led to the discovery of the oldest known fortification wall within the city perimeter. The wall stretches diagonally over 30 m in length west of the cathedral. Vertical traces of the wall structure stretching along its entire length have been established. They provide evidence on two layers manifested by vertical stratigraphy and morphology. Eastern wall has much deeper foundations than the western, and judging by the masonry technique might be dated in the fifth or sixth century. It clearly represents a segment of a late antique castle, reinforced from the west during the early Middle Ages. The structural reinforcement articulated with pilasters rests on much lower foundations.<sup>7</sup>

Archeological research of the church of St Bartholomew located opposite the cathedral, carried out within the context of the restoration of the Bishop's Palace, has resulted in the findings on the basis of which I aim to propose a new mapping of the late antique castle. The church of St Bartholomew underlies the south-west corner of the Bishop's Palace. Originally, it was devoted to SS Cosmas and Damianus (figure 3).8 Even prior to excavations, its pre-Romanesque phase was clearly discernible in the original portal, subsequently

<sup>&</sup>lt;sup>5</sup> Ivica Žile, »Naselje prije Grada«. *Dubrovnik* N.S. 8/4 (1997): pp. 110-111.

<sup>&</sup>lt;sup>6</sup> Vinko Foretić, »Pisana povijena vrela o najranijim stoljećima Dubrovnika«. *Izdanja Hrvatskog arheološkog društva* 12 (1988): pp. 9-10. However, on the basis of early Christian material remains, Cvito Fisković, the doyen of Croatian art history, had already established the existence of a settlement a century or two prior to the dating held by traditional historiography. His dating was soon adopted by the historian Josip Lučić.

<sup>&</sup>lt;sup>7</sup> J. Stošić, »Prikaz nalaza ispod katedrale«: pp. 15-16.

<sup>&</sup>lt;sup>8</sup> Igor Fisković, »Crkva Sv. Kuzme i Damjana u središtu Dubrovnika«. *Dubrovnik* N.S. 8/4 (1997): pp. 261-273.



Figure 3. Remains of the pre-Romanesque church of SS Cosmas and Damianus

built into the posterior palace structure. In addition to the material remains, historical sources provide evidence on the church in the latter half of the eleventh century. Excavations revealed the remains of a presbytery articulated with a semicircular apse with two additional lateral apsidiolas. Further excavations under the devastated pre-Romanesque nivelette of the church floor, at its western end, resulted in the finds of a rectangular tower—that is, its western and northern wall. The unearthed remains were built in prolonged rectangular blocks placed in regular layers (figure 4).

Slightly northwards, on a lower level than the remains of the southern city tower, on the very rock bed, a wall stretching east-west has been found. Given the masonry, the wall belongs to the segment of a late antique castle on *Bunićeva poljana*. At present, it is difficult to say whether they form an integral whole, but there is no doubt about their dating.<sup>10</sup>

<sup>&</sup>lt;sup>9</sup> Ivica Žile, »Novi nalazi predromaničke plastike u dubrovačkom kraju«, in: *Starohrvatska spomenička baština - rađanje prvog hrvatskog kulturnog pejzaža*, ed. Miljenko Jurković and Tugomir Lukšić. Zagreb: Muzejsko-galerijski centar, 1996: p. 153.

<sup>&</sup>lt;sup>10</sup> Ivica Žile, »Zaštitna arheološka istraživanja u palači Gučetić-Martinušić«. Obavijesti Hrvatskog arheološkog društva 29/3 (1997): p. 108.



Figure 4. Late antique wall and early medieval tower

Grounding my assumption on the mentioned chronological determinant—the fact that in the interior of the former church of SS Cosmas and Damianus the remains of a late antique wall have been found (does it form the eastern part of the late antique castle?), annihilated by the building of the tower—this method has enabled the establishment of the earliest possible date of the tower's construction. The building of the pre-Romanesque church from the end of the tenth or the beginning of the eleventh century, whose dating is supported by its architectural remains, stone furniture and archive records, helps establish the upper time limit of the tower's existence, and that is the turn of the tenth century.

The discovery of early Christian fragments first noted in the southern city segment clearly contribute to the assumption that on the site of the medieval *Ragusium* a settlement had thrived in the late antiquity.<sup>11</sup> Recent archeological

<sup>&</sup>lt;sup>11</sup> Cvito Fisković, »Starokršćanski ulomci iz Dubrovnika«. *Starinar* N. S. 9-10 (1958-1959): pp. 53-57; Ivica Žile, »Spolia i ostali nalazi skulpture i plasike u Dubrovniku do pojave romanike«. *Izdanja Hrvatskog arheološkog društva* 12 (1988): pp. 178-179 and 183-184.

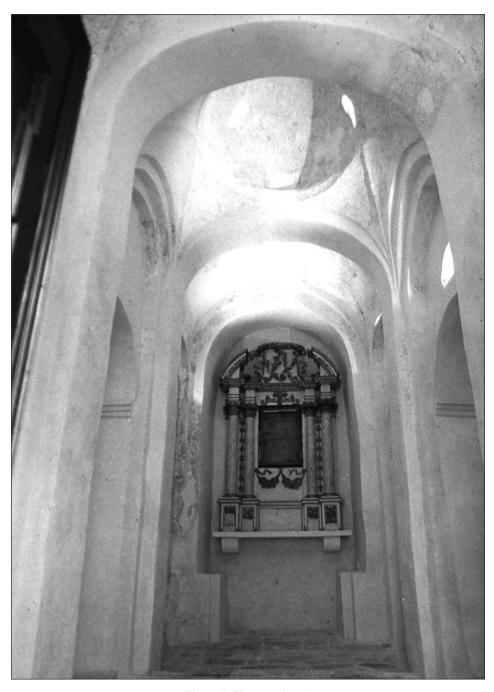


Figure 5. Sigurata church

excavations resulted in numerous finds not only on its southern but also northern side, where the first late antique sacred structure underlying the pre-Romanesque floor of the church *Transfiguratio Domini*, commonly known as *Sigurata*, was unearthed (figure 5).<sup>12</sup>

Besides the evidence from late antiquity, excavations under the cathedral resulted in the discovery of numerous Byzantine coins which belong to the monetary series issued during the reign of emperors Justinian I, Tiberius II and Constans II.

During the 1987 reconstruction of the block embracing the cinema, Town Café and theatre (area of the former Arsenal), archeological research carried out in the south-west corner of the then bookshop resulted in the discovery of a vaulted structure with a rectangular ground plan. Its examination was resumed in 1990 within the context of the restoration and conservation of the Small Onofrio's Fountain, which partially destroyed its corpus. Judging by the technique applied in constructing the ceiling girders as well as the skilled use of ashlar masonry, the building is most likely of Romanesque origin. The presence of girders testifies to the structural reinforcement of the ceiling. Given the static specifications of such a small structure (inner dimensions: length 3.56 m, width 1.82 m, depth 3.70 m, where stone pavement was found), one might be puzzled by its actual function. The only reason why the vaulted structure was reinforced may lie in the fact that it served as support of some kind. Judging by its location, it appears to have been a bridge-tower which, at the time, probably stood on the south-north communication leading to the pre-Romanesque church of St Nicholas, Archeological excavations of 1990 shed a new light on the structure itself. Its west wall was constructed at a depth of one meter in inclination, with three grooves in which wooden pillars were found. The inclined construction of the west wall also bears witness to the structure's static quality. During the final examination stage, samples of wooden pillars were taken for dendrological analysis as well as for the radioactive carbon analysis. Two structures flanking the vaulted building from the east and west contributed to its dating. Small Onofrio's Fountain, dating from the 1440s, is located on the west and neutralizes part of the ceiling and west side of the vaulted building, representing the upper chronological limit of

<sup>&</sup>lt;sup>12</sup> Željko Peković, »Crkva Sigurata na Prijekom«. *Prilozi povijesti umjetnosti u Dalmaciji* 35 (1996): pp. 253-270; Igor Fisković, »Crkvica "Sigurate" u Dubrovniku - ratom oštećeni te obnovljeni višeznačni spomenik«. *Radovi Instituta za povijest umjetnosti* 20 (1996): pp. 58-81; Željko Peković and Ivica Žile, *Ranosrednjovjekovna crkva Sigurata na Prijekom u Dubrovniku*. Split: Muzej hrvatskih arheoloških spomenika, 1999.



Figure 6. Remains of a bridge-tower, interior



Figure 7. Remains of a bridge-tower, exterior

the original function of the structure. East of the building, the remains of a fortification wall have been found. They represent fragments of the eastern fortification system of the city of Dubrovnik, the construction of which dates from the latter half of the thirteenth century, defining the upper chronological level of the building (figures 6 and 7).<sup>13</sup>

Archeological research on the site of the Baroque Caboga palace resulted in yet another valuable discovery of Romanesque origin in addition to the unearthed defence walls or systems of the earlier periods. <sup>14</sup> The earliest archive data which could be related to the fortification wall found in the east chamber of the Caboga palace is a trial account of 26 June 1258. <sup>15</sup> One of the parties involved submitted a judicial document from 1255, which clearly demarcated his plot from the monastic estate of St Simon. The latter was demarcated by a landmark indicated SI, positioned 57 ells from the old city wall and 56 ells from the new city wall. Judging by the document, they faced north and ran parallel to each other. The length of the monastic estate which could help locate the city walls more accurately remains obscure. A discovery of the remains of a fortification wall in 1982, during the reconstruction of the Rector's Palace and in front of it is also noteworthy. Minor fragments have been found in the interior of the Palace, but deep probes in the exterior helped trace a wall 150 cm wide, stretching east-west (figure 8).

Based on the assumption that fragments found in the eastern chamber of the Caboga Palace belong to the city wall, but also on the previous find of a fragment of a fortification wall in Rector's Palace and in front of it, it is possible to come forward with an ideal reconstruction of the city wall as mentioned in archive sources in 1255 and 1258. The year 1296 might be taken as the latest possible dating of the fortification wall fragment, the year when the Statute provision regulating this matter was issued. By that time the northern circuit of today's city walls must have been constructed, implying thus the spreading of the city to Prijeko and annihilating the function of the located wall fragment. An attempt to reach a more exact earliest dating requires additional excavations in the zones of the proposed ideal reconstruction of the outline of the northern defence wall.<sup>16</sup>

<sup>&</sup>lt;sup>13</sup> Ivica Žile, »Fotifikacijski sustavi«: pp. 225-227.

<sup>&</sup>lt;sup>14</sup> Ivica Žile, »Rezultati arheoloških istraživanja u palači Kaboga 2-4 u Dubrovniku«. *Radovi Instituta za povijest umjetnosti* 16 (1992): pp. 19-27.

<sup>&</sup>lt;sup>15</sup> Codex diplomaticus Regni Croatiae, Dalmatiae et Slavoniae, V, ed. Tade Smičiklas. Zagreb: Jugoslavenska akademija znanosti i umjetnosti, 1907: pp. 95-96.

<sup>&</sup>lt;sup>16</sup> I. Žile, »Rezultati arheoloških istraživanja u palači Kaboga«: p. 25.



Figure 8. Fortification wall in front of the Rector's Palace

Archeological investigation of the Home of Marin Držić, museum located at the southern end of *Široka ulica* in the central city area, resulted in new scientific discoveries concerning the Domino church, originally titled All Saints. According to thirteenth-century Statute provisions regulating urban development, it was located in front of the old city gates—that is, at the busy communication crossroads.<sup>17</sup> Its erection on this site, however, is of much earlier date than the urban development projects of the thirteenth century, as evidenced by the archive data from 1186, which refers to the patronage of the church *Omnium Sanctorum*.<sup>18</sup> Research has established three periods which, in terms of style, determine three construction phases on this site—pre-Romanesque, Gothic and Baroque.

<sup>&</sup>lt;sup>17</sup> Lukša Beritić, *Urbanistički razvitak Dubrovnika*. Zagreb: Zavod za arhitekturu i urbanizam Instituta za likovne umjetnosti JAZU, [1958]: p. 14.

<sup>&</sup>lt;sup>18</sup> Gregor Čremošnik, »Nekoliko dubrovačkih listina iz 12. i 13. stoljeća«. *Godišnjak Zemaljskog muzeja u Sarajevu* 42 (1931): pp. 38-39.

Three devastated graves found under the Gothic nivelette in the eastern vaulted space belong to the pre-Romanesque period. Two graves were dated by the Byzantine coins (folis) found inside from the tenth and eleventh centuries. Two fragments of a pre-Romanesque sculpture have been excavated, which belong to the stone furniture of the church and by style have been dated to the second half of the eleventh century. The pre-Romanesque church could not be traced, because the Baroque church subsequently constructed on the site limited the excavation area, but the fragmentary results without doubt confirmed the credibility of the 1186 archive data.

The second phase is related to archive evidence on the construction of a new three-naved church. Excavation has illuminated the question of the so-called crypt, or the eastern vaulted space. The latter should be viewed in the context of the two vaulted spaces located more westward. The vaulted spaces



Figure 9. Gothic substructure with pre-Romanesque graves

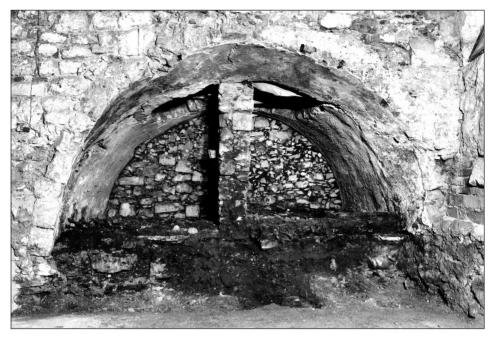


Figure 10. Central substructure of the church Domino

on the ground floor of the museum building stretch to the south beneath the Baroque floor of the Domino church. In the Baroque period the spaces were compartmented and used as burial chambers. Their northern end is not defined, as it was destroyed by the foundations of the Giorgi-Mayneri palace. The tree unique vaulted spaces stretch along north-south axis, and functioned as substructure of the Gothic church (figures 9 and 10).

The actual building of the museum belongs to the Baroque period. Being located between two Baroque structures—Domino church to the south and Giorgi-Mayneri palace to the north—its architecture is subordinated to them. At the earliest, the museum building could have been constructed in the first decades of the eighteenth century (the church was consecrated in 1709) on the site of the northern nave of a Gothic church, using the central and western vaulted space as its ground floor.<sup>19</sup>

In Pustijerna (south-east part of the historic city nucleus) archeological excavations were carried out with the purpose of tracing the remains of the

<sup>&</sup>lt;sup>19</sup> Ivica Žile, »Rezultati arheoloških istraživanja u Domu Marina Držića u Dubrovnika«. *Radovi instituta za povijest umjetnosti* 12-13 (1988-1989): pp. 49-55.

church of St Thomas and the Benedictine nunnery. The earliest mention of the convent in archive sources dates from 1234. The area under archeological survey included the space of three former blocks, bounded by four historical streets: *Ulica ispod mira* (south), *Ulica od Pustijerne* (north), *Bandureva* (west) and *Stajeva* (east). Excavations in this area failed to reveal any traces of the monastic complex with the church of St Thomas. Judging by these negative results, attempts to locate the convent should be resumed on the site of the bastion of St Saviour built in the middle of the seventeenth century. Its construction annihilated the older buildings on top of which it was raised. Excavations clearly pointed to deeply embedded structures that preceded the foundations of the bastion (figure 11).

A new street which ran north-south, parallel to *Bandureva ulica*, has been discovered. The two streets are identical in width. The street was covered with soil after the 1667 earthquake, as well as other remains of residential architecture. Its intact pavement might be cross dated with the discovered ground floor of a sixteenth-century Renaissance palace built on its western side. The remains of residential architecture on the eastern side of the street are of the same dating as the Renaissance palace. The remains bear witness to successive alterations which could be accounted by frequent earthquakes.

Following the "Great Earthquake" of 1667, the whole area was used as a deposit for waste construction material. In the nineteenth century, a garden was designed on the site. For this purpose huge amounts of soil were brought to the spot. The remains of garden architecture have been traced immediately under the ground level of the basketball court built in the latter half of the twentieth century.<sup>20</sup>

The reconstruction of the Baroque palace—today City Elementary School damaged in the (1979) earthquake, and the construction of new school facilities in the adjacent garden were preceded by comprehensive acheological excavations. The finds of residential architecture in the school yard contributed to the knowledge of the structure of this, in terms of size, largest block within the urban fabric. The organisation of the block reflects the influence of earlier construction, because it had integrated a section of the old city wall which separated the complexes from its northern and southern side. The articulation of the space founded on the urban development regulations from the thirteenth

<sup>&</sup>lt;sup>20</sup> Željko Rapanić, »Dubrovnik, Arheološka istraživanja na Pustjerni«. *Arheološki pregled* 27 (1986): pp. 139-141.





Figure 11. Remains of residential architecture - Pustijerna

Figure 12. Remains of residential architecture - The City Elementary School

century, persisted until the 1667 earthquake, after which the central part of the block was built, while other parts maintained their earlier position. The corner Baroque palace (school) formed a unit with the space which was filled up with a stratum of gravel, covering thus the traces of earlier construction (figure 12).<sup>21</sup>

Systematic archeological excavations on the complexes of the former convents of St Andrew and St Bartholomew are located in the south-west part of the city. In the south, the excavation site was engulfed by the city walls, north and west by the complex of the old people's home *Domus Christi*, and in the east by the buildings in the streets *Ferićeva* and *Na Andriji*. The multilayered historical picture of the complex is supplemented by rich historical sources, on the ground of which in the immediate vicinity of the convent of St Andrew the church of St Martin (1279) was located. The convent of St Bartholomew is first mentioned in 1169, and in its proximity a hospice (*Hospital grande*) was built in 1387. The earliest mention of the convent of St Andrew dates from 1234. From their first references until the 1667 earthquake, when these buildings with the exception of the hospice were heavily damaged, abandoned or covered with soil, archive sources help us trace numerous

<sup>&</sup>lt;sup>21</sup> Romana Menalo, *Izvještaj o arheološkim istraživanjima u vrtu O. Š. "Grad"*. Dubrovnik: Dubrovački muzeji, Arheološki muzej, 1988.

structural alterations, extensions and adaptations. Particularly valuable is a decision of the Major Council from the turn of the fourteenth century governing the construction of the public granary—fossae frumentorum communis—on the ground floor spaces of the convent of St Andrew and St Bartholomew and the hospice. In addition to the earlier-mentioned factors that contribute to the specific quality of this archeological site, one should note that these buildings were designed in such a manner so as to respect the terraced terrain of the south-west ridge of the city. Monastic complexes are separated by the newlyfound street running east-west. To its south lies the convent of St Andrew. which occupies three terraces. The southernmost highest terrace is backed by the city wall. Nine graves were discovered on it, which, by their typological features, cannot be dated to the pre-Romanesque period, while their upper time frame is determined by the 1667 earthquake. The monastery church was destroyed during this earthquake and the subsequent reconstructions of the south city wall. Originally, the church was an integral part of the wall framework. South-west of the unearthed graves, clearly discernible on the southern city wall, is a horizontal string course, the result of the adjoining of the two wall structures. One of them can readily be attributed to the former wall body of the church of St Andrew, since the material remains found on the mentioned location are also confirmed by archive sources (figure 13).

Three dry grain wells have been discovered in the eastern part of the second terrace, while its remainder produced the remains of three chambers. The lowest terrace in the north is flanked by the earlier-described street and a system of stairs both in the east and west as well as a sloping pavement, forming a unique space despite the five-meter difference between the south and north levels. From the south the space is enclosed by the three earlier-described chambers, and from the north by a system of buttresses carrying the vaulted ceiling made of tuff. This terrace should be viewed within the context of a unique space in which 17 dry wells were found. The floor was built of brick in the fishbone pattern, narrower side up.

Until now, the excavations have resulted in the discovery of 20 dry grain wells, 6-8 meters deep, most of which having their stone frames preserved. The depth of the wells varies in accordance with the configuration of the terrain, thus in shape often departing from the original pear-like design. For most part, they were dug in bed rock, and partly in tuff. Their interior was covered with watertight mortar. They were all filled with gravel. The capacity of five dry wells can be established with exactitude because at about one meter

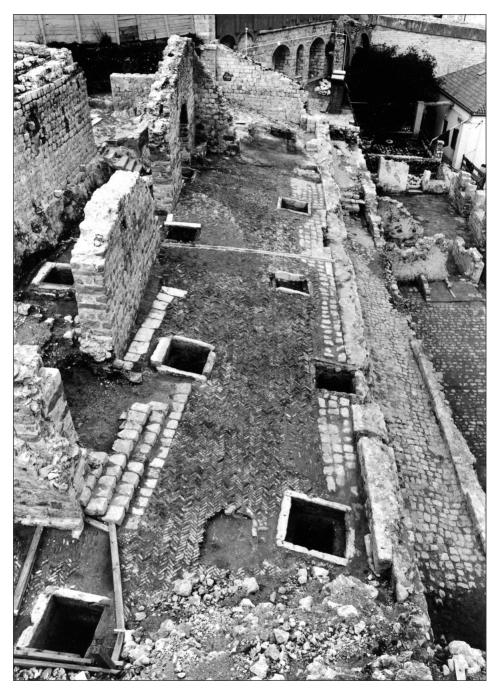


Figure 13. Remains of the monastery of St Andrew

from the bottom several wells contain a built-in stone plaque designating the well and its capacity in *staria* (1 *starium* was equivalent to 64.5 kg of rye and 71.5 kg of wheat). For instance, the "C" well has the volume of 420 stars, the "F" well 488, the "S" well 376 stars, etc. According to archive data from 1410, Italian master Antonio Mafri of Trani was commissioned to construct the communal dry wells.

North of the discovered street a monastic complex of St Bartholomew (later called also St Mark) was located. It also stretches across three terraces. Two additional dry wells have been found on the second terrace. Archeological excavations were terminated shortly before the Serbian and Montenegrin aggression on Dubrovnik and have not been resumed until this very day. For this reason it is difficult to speak about the archeological results concerning this monastic complex.<sup>22</sup>

Revelin remains the only fortress archeologically examined to date. It is located between the outer and inner east city gates. Archeological investigation has confirmed the archive data by which Revelin was constructed in the middle of the fifteenth century. Excavations resulted in the discovery of the remains of the original fortress with residential and industrial facilities—foundry. Two furnaces for casting cannons and church bells have been found. Based on archive records, the remains of the industrial complex and a house have been attributed to the most famous bell and cannon caster who worked in Dubrovnik in the Renaissance period—master John the Baptist of Rab (island in the northern Adriatic) (figure 14). By building a new Revelin according to the design and proposals of the famous civil engineer Antonio Ferramolino from Bergamo, started in 1539 and completed in 1551, most of the former masonry structures of the fortress were dismantled in order to build the new Revelin according to the accepted project. It is likely that most of the stone masonry was re-used for the building of the new fortress, while the remains of the older fortress, found within the interiors of the new one, bear witness to the development of the defence system of this area, from late antiquity to Baroque.<sup>23</sup>

During the Serbian and Montenegrin aggression of 1991, the historic nucleus of the city of Dubrovnik was severely damaged by heavy shelling and

<sup>&</sup>lt;sup>22</sup> I. Žile, »Novi nalazi predromaničke plastike«: pp. 281-282.

<sup>&</sup>lt;sup>23</sup> Romana Menalo, *Izvještaj o arheološkim istraživanjima u Revelinu*. Dubrovnik: Dubrovački muzeji, Arheološki muzej, 1986.



Figure 14. Remains of the foundry and house of the bell and canon caster John the Baptist of Rab, fort Revelin

bombardment.<sup>24</sup> As early as 1992 archeological and conservative investigations were initiated prior to appropriate reconstruction of the monumental heritage of the city of Dubrovnik. As mentioned earlier, investigations have produced some new scientific results pertaining to late antiquity and pre-Romanesque periods within the city's perimeter, as for instance, the churches of Sigurata

<sup>&</sup>lt;sup>24</sup> Ivica Žile, »Ratna razaranja spomeničke baštine u Dubrovniku i okolici.« *Radovi Instituta za povijest umjetnosti*, 17/1 (1993): pp. 64-79.

and SS Cosmas and Damianus. Excavations have been carried out in the residential monumental complex of the burnt down Baroque palaces. <sup>25</sup> Beneath their Baroque stratum the remains of a Gothic-Renaissance ground-floor spaces have been discovered, constructed according to a precisely determined architectural pattern of the cited time periods.

A short survey of the archeological investigations carried out within the perimeter of the historic nucleus of the city of Dubrovnik until now is but a concise review of the contribution of archeology to the reading of the origin and development of the city of Dubrovnik. Numismatic finds serve as proof of the existence of a settlement on the site of *Ragusium* (its southern slopes) as early as the third or even fourth century BC. The Roman period is also confirmed by the finds of coins and tombstones. The period of late antiquity exemplifies in the finding of a castle and early Christian memoria (*Sigurata*) as well as numismatic remnants. With the early medieval period material evidence becomes abundant, allowing easier study of the growth of Dubrovnik's urban whole.

<sup>&</sup>lt;sup>25</sup> Ivica Žile, »Zaštitna arheološka istraživanja u palači Gučetić-Martinušić«. *Obavijesti Hrvatskog arheološkog društva* 29/3 (1997): pp. 109-114.