

City and Stone

City and Stone is a project that offers visitors to Telč an unconventional view of the city's architecture in terms of the processing of the local stone – granite – across centuries and building styles. At fifteen stops leading around the city center, the visitor has the opportunity to learn about geology in practice and to reflect on technical, architectural and historical contexts. Follow-up questions complement and liven up each stop.

When visitors look around Telč Square, they can see at first glance the beautifully decorated Baroque and Renaissance facade of burgher

houses. However, the building styles extend from Romanesque to Baroque. There is also the influence of the Classicist period from the turn of the 18th to the 19th century. Granite was used in Telč for centuries as a building stone, so you will not find a building in the square that is not, at least partially, out of granite. Paved paths, memorials, divine tortures, columns, vaults, altars, cemeteries with tombstones, benches, pond dams, bridges, fences, parts of houses, castles, towers, chateaux, embankments etc. – they are all made out of granite. In other cities of the Czech Republic the use of granite is not so widespread. Other stones, such as ruts, sandstone, limestone, limestone, marble, amphibolite, snakes, etc., are often used. Very often, the building stone that was most accessible in a particular area was made use of. Since the railway reached Telč as late as in 1898, it was very difficult for the town to import building stone from far away regions. Granite is, and has always been, financially less accessible because its processing is much more demanding and requires more work than, for example, soft limestone or sandstone. It was Zachary of Hradec who contributed significantly to the construction and especially the rebuilding of the city





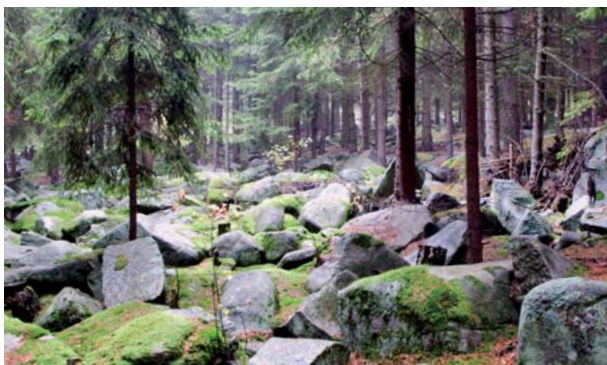
in the 16th century. His “investments” into granite during his building period have paid off. It is not by chance that it is called “the everlasting stone”. It is sturdy and resists weathering; it can be broken into large blocks, it can be polished, it does not absorb water, it is compact and therefore color-stable. Thanks to these features, the center of Telč has retained its appearance for several centuries.

Granite has been mined and processed since the Middle Ages throughout the territory of the Vysočina Geopark. In ancient times, loosely lying blocks and boulders were used, and smaller splinters were gradually created. In the second half of the 19th century, the growing demand for quality stone led to the creation of local, larger and often mechanically equipped stone quarries. Some of them have now disappeared or have been flooded (e.g. the flooded quarries of Čenkov, the quarry at Řásná u Štamberka, Řídelov and the quarry in Mrákotín), others are new or are still functioning today (Zedníček Mrákotín quarry, Kavex Mrákotín, Sumrakov, Vanov, Rácov and Panské Dubenky).

Mrákotín granite is one of the best in Central Europe. Its quality certainly contributed in the early 1920s to the fact that the Office of the President of the Republic accepted the offer of the Mrákotín stone quarries to make the so-called Sloup svobody (Freedom



Column) – a monolith, for the Prague Castle. However, the first attempt to transport this huge 18-meter block of stone was not successful – the stone broke. During the second time, the Mrákotín granite successfully reached Prague, and the monolith still overlooks the III courtyard of the Castle. In the Museum of Stonework in Mrákotín, you can find not only a detailed description of the production and transport of this monolith, but also examples of stonework, an authentic stone porch, and information about local quarries and stonemasonry traditions.



1 Upper (big) gate and stone bridge in Palacký Street



The Upper Gate was part of the fortification of the city. Its outer part has survived to this day, the interior that was standing in Palacký Street was demolished in the first half of the 19th century.

2 1 Do you know where it was?



2 2 Do you know why the small detail - the symbol of the rose - is laboriously carved into the granite?

The outer gate, decorated with sgraffito and covered with a shingle roof, dates from the second half of the 16th century. Above the passage is carved a five-petal rose, which was the symbol of the Lords of Hradec. In 1629, the city walls were repaired.

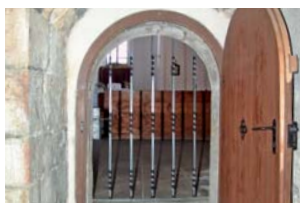
A look at this gate reveals that the elements which carry the most weight and required demanding workmanship are made of granite, while the rest are stones from fields, most often gneiss. Granite is a very solid and high quality building stone, which can be worked into large pieces. However, granite is also a fairly precious stone, so that where it was unnecessary, other stone building material was used.



In place of this stone bridge, there used to be a moat spanned with a wooden bridge, possibly a drawbridge. This stone bridge was first built at the end of the 17th century.

2 3 Why do you think that was so?

2 The Church and the Tower of the Holy Spirit



The Tower of the Holy Spirit is the oldest surviving monument in the city. It is a late Romanesque building from the middle of the 13th century. At that time, there was nothing like it in that region. The first historical references to the regional town - Jihlava - come from around the same time. Interestingly, the initial settlement of Telč was not exactly in the place of the square. The first signs of settlement can be seen around the Tower of the Holy Spirit, at the Old Town or Štěpnický pond, on the bottom of which was found a cobblestone path, and further to the northeast of Telč, in the part called Na Štěpnici.

The reason why the Tower was built still remains unknown. Its prismatic body is built of relatively large, carefully machined granite blocks. Its tremendous weight (it is one of the hardest materials to process) and its hardness require a lot of effort. It is hard to imagine today how the builders and stonemasons in the 13th century were able to work with this material without machinery, using only their bare hands and simple mechanisms.



? 4 In some of the blocks, tiny dents are still visible. Do you know why?

The Tower was reconstructed in 2018, and it now offers visitors a modern exhibition mapping the development of the city.

The adjacent Church of the Holy Spirit was built on the site of a former Romanesque church, which probably did not have a parish

function, but served the royal administrator and his subordinates. The first written mention of the existing Gothic church dates from 1487. After the church was deconsecrated by Joseph II, it served as a warehouse, later as the town theater. Since 1922, it has belonged to the Evangelical Church of the Czech Brethren.

3 Stone walls, fortifications, ditches



The remains of the medieval fortifications of the town are still visible in Hradební Street. Already in the 14th century, the town was surrounded by fortifications behind a moat, which was filled with water from adjacent ponds when the town was in danger. Thus the town became an undefeatable water fortress. The original walls were initially about 9 meters high, but in the 17th century they were raised to 10.5 meters and finished with a ledge. In the lower part, the walls were up to 2 meters wide.



On a closer look, you notice that the predominant building material of the fortifications was gneiss rather than granite.

2 5 Why was that so?

Interestingly, that which is undefeatable to humans (the fortifications of the city) is not to nature and its processes. The evidence of this can be found in visible signs of natural stone deformation (gneiss): wrinkles. These are formed by the plastic deformation of the rock at elevated temperature and pressure - the conditions are such that even stone "bends".



Roughly in the middle of Hradební Street, there was a small gate in the walls leading to the water. Originally, it was the only place that walls had an opening, except for the gates.

6 Do you know what the small gate was used for?

4 Houses and arcades



As has already been said, it is almost impossible to find a house in the square that was not made of granite. The first houses were built on stone foundations in the 14th century. The ground floor was also made of stone, but the upper floors were made of wood.

? 7 Do you know why the entire house was not made of stone?

Several structural or decorative elements, such as portals, jambs, columns in the arcade, decorative elements on the gables, etc., were also made of granite.

It was not until the middle of the 15th century that an arcade was added to most houses in the square. The facades and gables were designed individually, but some fronts were rebuilt in the



following centuries, so only a part of them retained their original Renaissance character. Most facades and gables bear the features of baroque or even later styles.

During the reign of Zacharias of Hradec, in the middle of the 16th century, the extraction of granite increased rapidly, not only for the reconstruction of the castle, but also for burgher houses and buildings in the surroundings. At this time, when there were no stone quarries, freely lying stones in the nearby forests were collected and processed. Today, it is still possible to find the partially worked boulders in the woods originating from this period, see photo. As the demand for local quality stone increased, official quarries were opened in the 1870s, and mining began to be carried out in large quantities.

5 Guild signs



The guild signs of the town's artisans are engraved on some of the columns supporting the arcade. In the 16th century, twenty major crafts were present in the town.

The most visible guild signs are at house No. 8 and on the column of house No. 64, located on the opposite side of the square. The signs of the Butcher's Guild are engraved on these columns. Butchers had an important position in the town. In 1490, Jindřich of Hradec granted the Butcher's Guild a statute. The Butcher's Guild was the oldest guild in Telč. Until the 1860s, butchers could





cut and sell meat only in the meat shops that can be found in today's Masné krámy Street. In this street, there were 13 meat shops on both sides.

In 1513, the Guild of Shoemakers and Leatherworkers was founded; in 1524 the Weaver's Guild; in 1556 the Rope maker's Guild; in 1563 the Tailor's Guild; in 1578 the Furrier's Guild; in 1601 the Guild of Stonemasons, Joiners and Glaziers, and in 1603 the guilds of Bakers, Potters and Millers.



8 Do you think there was a stonemason's sign on one of the pillars in the square?

6 House No. 15



The most striking house in the square is the house with an oriel. Stone jambs frame the windows in the oriel. At first glance, the facade of the house is interesting. The house has a late renaissance gable, similar to the one at house no. 14. The type of sgraffito on the lower part of the facade was very popular in Bohemia during the Renaissance. Those who could not afford the sophisticated decoration had a simplified version of the sgraffito. A string was stretched to maintain a straight line and the sgraffito was engraved in the plaster.

The painting, which is placed at the front to the left of the sgraffito, depicts the house before it was rebuilt.

2 9 Where happened to the two windows on the ground floor?

In the picture, we can see the attic and battlements. The attic is a decorative architectural feature that not only optically enhances the building, which looks “richer”, but also covers the roof. When the roofs were wooden, the attics prevented a fire from spreading.



The battlements are the toothed ends of the top of the building. Even though the house was rebuilt several times for aesthetic and practical reasons, some elements are still original and timeless. Examples include windows with a stone jamb.

Interestingly, dyes from organic and inorganic materials were added to earlier plasters before the times when expensive chemically extracted pigments became available. The color shades of the facades were not very intense. For example, coal was used as a black dye, white was made from lime (i.e. limestone or marble); red was created from the mineral hematite (another name red iron ore) or crushed burnt bricks; limonite (or hnedel) gave yellow to brown shades, among other things; blue was derived from a plant called indigo (also known as *Indigofera*), green from the mineral seladonite (or green clay). Green began to be used more in the Baroque period, while in the Renaissance, shades ranged from ochre to red. Blue was not very used as it was very rare and expensive.

7 Town Hall



The Town Hall is the largest house in the square. It originally consisted of two gothic houses, which were later joined by a unified Renaissance facade. Next to the entrance gate, there is an iron measurement of one fathom with a marked angle and the sign of the altitude of the town of 522.5m. The arcade features a memorial plaque commemorating the town's acceptance on the UNESCO list in 1992.

On the facade of the Town Hall, we can see typical Renaissance elements such as attics, ornamental battlements, sgraffiti, or a high cordon cornice. Around the middle of the 18th century, the whole building was renovated in Baroque style. However, this change is not visible on the facade of the house.

? 10 Do you know what element of the facade comes from Classicism?

? 11 Can you remember the rock that was used more often than granite for complex structural and sculptural elements because they could be processed more easily? It was typically used during the Baroque period - for example, the statues on Charles Bridge, Kuks, etc.



The stone jewel of the Town Hall is a decorated granite column with a twisted stem located in the middle of the entrance area, in the place of the former maashaus. Such a column was a traditional Gothic element of former houses. However, the vault that converges into a column is already renaissance. This detailed carving of hard stone was very laborious.



8 Church of the Name Jesus



This seemingly atypical church, which sides with the square, was built in 1667. At that time Renaissance was no longer fashionable. The new style was called Baroque and sought to turn people away from worldly pleasures towards God. Therefore, Baroque churches were very richly decorated. The simpler stucco of the interior decoration of the church is early Baroque. Many of the building elements in the interior of the church are made of granite – such as the flooring, pillars, jamb, but also a holy water font.

On the other side of the church is the Jesuit College. The Jesuits focused on the spread of faith, especially through education. After the order was abolished, the building was used for about one hundred years as barracks, and later as a school. Even today, the purpose of this building is to provide education. It is the seat of the University Center of Masaryk University in Brno.

Part of the external decoration is also the stone portal.

12 Do you know how it differs from the portals of burgher houses?



12



13



? 13 Do you know what other stone is used in the interior of the church?

9 The Church and Tower of St. James



This church was founded together with the town in the 14th century, but it soon burnt down. In the middle of the 15th century, it was rebuilt as a double nave, late Gothic building and decorated with beautiful frescoes.

The church also includes a tower from which the town and its surroundings can be seen in their unparalleled beauty. There are 40 granite stairs in the spindle staircase and 105 wooden stairs between the top floors of the tower.

? 14 Can you guess or calculate the height of the tower?

? 15 Since we talking about height, do you know how high the mountains were in today's Vysočina (Highlands) during the Paleolithic Age?



14



Inside the church there is a remarkable Gothic vault resting on three pillars that divide the double nave. Next, in the church we can see rare Gothic frescoes, an original Baroque organ from 1725, and the pseudo-Gothic altar from 1879. Not only are the walls, pillars, arches, tombstones, which were placed in the floor of the church, made of granite but also the entrance to the crypt set in the floor, the modern ambo (pulpit) from the quarry in Mrákotín, and the treasury located near the main entrance of the church.

The cloister, through which we can enter the church from the north side, was added in 1737 thanks to the patronage of burgher Ondřej Hanusík. To gain special merit, wealthy burghers would finance the building the town. In the cloister there are memorials to the victims of World Wars I and II. The ceramic commemorative plaques to the fallen in the World War I were made by the local Folk Painting Workshops (Lidová malírna) in the beginning of the 1920s. The commemorative plaques of the victims of World War II were placed here in 1994.

The main door on the south side leads to Kypťovo Square. Jan Evangelista Kypť was a teacher, choir conductor and composer who worked in Telč in 1848-68. In the square, along the walls of the church, you can see valuable tombstones left over from the cemetery that was kept here until the 17th century.

10 The State Chateau – All Saints Chapel



The Telč State Chateau is a real Renaissance jewel. However, few know that this castle was originally a water Gothic castle. The stone core of the Gothic castle can be seen during a tour of the castle underground. The simple L-shaped building was primarily of a defensive character and was fortified by a wall and a moat to protect it from the town as well. In 1550, Zacharias of Hradec settled down permanently in Telč, and he reconstructed the old castle and expanded it with newly built Renaissance palaces. Part of the work was carried out under the supervision of Italian artists who Zacharias had invited to Telč after his journey to Italy, where he was heavily influenced by Italian Renaissance art. Zacharias largely contributed to the costly reconstruction of the castle. He was able to finance this investment from his large income from various estates, and also from silver mines.

Today the remains of Zacharias of Hradec and his wife are buried in the tomb of the All Saints Chapel. Rare stucco decorations cover the painted vault of the chapel.

216 Do you know where the nearest silver mines to Telč were?



On the right above the entrance gate to the chateau complex, there are the stoned alliance coats of arms of the newlyweds Zacharias of Hradec (right coat of arms) and Catherine of Valdštejn (left coat of arms). Not only was the piece exhibited difficult to carve but it was also difficult to find the perfect block granite with the same granularity. The most exclusive pieces of granite were used for similar purposes, larger pieces of solid granite, for example, on driveways to the walls, etc., and common stones from fields, for example, as “fillers” into the walls. In terms of granularity, granite is a stone of medium to rough grain. The reason for this is the fact that it forms through the slow solidification of the magma deep beneath the surface, and this process gives all the minerals that constitute it enough time to crystallize.

17 What do you think is hidden under this plaster and what material is the Baroque altar made of?

11 Lower (Small) gate



Deep in the past, one of two access roads led to the square near the present Lower or Small Gate. It dates back to 1579, when the castle was rebuilt. Since that time, the gate was managed by the prince, unlike the Upper (Great) Gate, which was under municipal administration. The original gate, which was placed lower, was not part of the castle.



Even in these places, there was a moat spanned with a wooden drawbridge. The Na Baště Street, which leads from the gate, today separates the two ponds Ulický and Štěpnický. The water from these ponds was used to fill the moats in case of danger to the town.

Staroměstský Pond was the third important Telč pond, which for centuries influenced the construction of the town. This water area still separates the Old Town from the Inner Town. The Old Town, however, has the character of a modest village, while the eastern, forested shore of this pond already marks the transition into open countryside.



? 18 Do you know the function of the stone element you can see in the detailed photo?

On a closer examination of the most used local stone, granite, we can see that it consists of several minerals. They are gray quartz, lighter feldspar and mica. Granite may contain either light mica (muscovite) or dark mica (biotite) or both. Granite from the Mrákotín region typically contains the gray-pink mineral andalusite, albeit in small quantities. Titanite, apatite, zirconium and other minerals may also be present in very small amounts in granite.



? 19 Do you know what influences the color of granite?

12 House No. 61



The houses in the square are mostly decorated with Baroque gables. Some of the houses, however, retained Renaissance gables. A beautiful example of a Renaissance gable can be seen on house No. 61. This house was bought by Michal the baker in 1553. He wanted to own the most beautiful house in the city because he intended to pursue the position of mayor, so he had the house rebuild and decorated. The Renaissance gable was inspired by Venetian Renaissance. The gable reveals that the reconstruction was completed in 1555.

The house was originally Gothic and so after its reconstruction, it retained the size and arrangement of the other

? 20 Do you know why the arcade was built?





Gothic houses in the square. At that time, the houses had no arcades, so the area of the square was considerably larger than that of the square today. From the square, you went through large gates with stone jambs into a vaulted hall - the maashaus, which originally served for production, trade or sale of beer. From this area on the ground floor, you either went upstairs to the other floors or downstairs to the cellars or through a passage to the courtyard. In the middle of the 15th century, most houses in the square received the arcade and whole facades with gables according to a unified plan.

Today, however, the entrance portal is not made of stone, but of concrete, and its appearance does not fit in with that of the portals of other burgher houses. At the turn of the 21st century, the house underwent a total historical redevelopment designed by its former owner, an architect who was inspired by a similar portal in Jihlava. However, it is not possible to use any stone in concrete that can weather, swell or react with other components in the concrete. It is necessary to use quality gravel, ideally granite.

13 Fountains



The fountains originally served as a source of drinking water, since not all houses had their own water supply. In the second half of the 19th century, a pump was built in the middle of the square to serve the same purpose. The municipal water supply provided drinking water to all houses in the square until the middle of the 20th century.

The lower fountain with the statue of St. Margaret was originally wooden, and built during the time of Zacharias of Hradec. Today's Baroque format of the fountain was made in 1611. According to a folktale, a century older statue of St. Margaret, the patron saint of the town, has the form of a Telč girl. St. Margaret is the patron of girls and peasants. The peasants prayed to Margaret for good weather for the harvest, the women prayed to her in childbirth. St. Margaret's attributes are a dragon, the cross, and the crown.

The upper fountain with the statue of Silenus with the little Dionysus in his arms was originally made of wood. The stone fountain replaced the original wooden one at the start of the 19th century. Silenus was a cheerful old man who was the educator and guide of the god of wine, Dionysus. Silenus was often associated with the shores of water and



21

21 Can you explain how these fossils formed in the limestone?

springs. That is probably why he is placed on the fountain.

The fountains themselves are made of granite, but the sculptures are already made of limestone, which is much easier to work with, and allows for the creation of fine details on the sculptures. Interestingly, most statues in the town are made of this material, which proves they were made at the same time, in the Baroque period. In a detailed examination of these sculptures, the eye of an inquisitive observer can find the remains of ancient organisms in the form of fossils.

14 Marian Column



Between the fountains in the middle of the square, there is a baroque Marian column. The column was built in the years 1716–1720. It was made on the orders of the burgher Zuzana Hodová, who provided a thousand gold coins for the column and for that amount of money, she required that the column stand opposite her house. The author of the column was David Lipart, a sculptor and carver from Brtnice, who created the work with the help of the Telč stonemason František Neuwirt.



At the bottom of the granite balustrade (rail), there are eight angels on the granite balustrade. In the middle part on the front pedestal, starting from the left you can see the statues of St. Sebastian, St. Jacob, St. Roch, St. John of Nepomuk, The Guardian Angel and St. Francis of Xaver. In the cave on the front pedestal is depicted St. Rosalia, and at the back St. Mary Magdalene. At the top of the Marian Column, the Virgin Mary stands on the Earth.



22 Do you know what attributes each of these saints have?

Even the statues decorating the plague column are made of limestone. We have already mentioned that limestone is suitable for making statues because it is easy to carve.

23 Do you know, however, what its “weak side” is?

15 Na Můstku Street



Walking along this historic pavement, we can hardly imagine how many people have walked over it, how many human destinies have unfolded here. From the viewpoint of granite, however, our human lives are truly ephemeral. The granites of our geopark originated in the period of the Paleolithic Age, during the Variscan orogeny, about 300 to 350 million years ago, with the solidification of the magma deep beneath the Earth's surface.

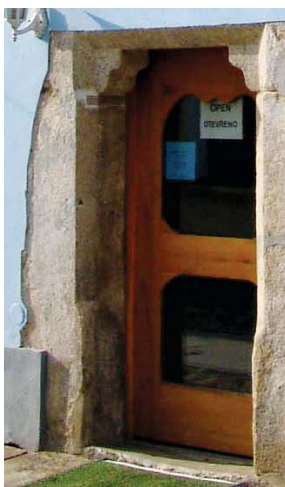
24 Can you guess what temperatures the magma reached, and at what depth granite solidified?

Deep magma rocks form bodies of different shapes and sizes under the surface of the Earth. Several such bodies can be found on the territory of our Republic. The largest of these is the Central Moldanubian pluton. This is an extensive granite body that extends from north to south direction and includes Austria and Germany. In its central part, there is the Vysočina Geopark.

25 Do you know what processes caused the “output” of this rock mass to the earth's surface?



On the paving in Na Můstku Street, we can see that the former granite was used as a building material in its unprocessed form, as it was found in the local forests. Part of this paving is original and part is modern. The paving is mostly made of granite, but also of local light quartz and dark quartz, which is called quartzite. The advantages of stone granite paving are strength (granite 4x stronger than concrete), durability, resistance to mechanical, chemical and natural phenomena, a better load distribution and an aesthetic appearance.



The granite paving will last about 200-300 years, whereas interlocking paving needs to be changed roughly after 10-20 years, when using salt even more often. However, ladies wearing heels or snow clearing vehicles will surely appreciate interlocking paving. However, interlocking paving is also used for economic reasons, since it is roughly twice as cheap as stone paving. In the long run, however, it is worth investing in quality stone.

26 Do you know why this type of paving is called “cat’s heads”?

Answers

- 1** The inner gate was located there where today the flow of traffic on the street narrows.
- 2** The choice of this material ensured that the coat of arms of the town owners, the Lords of Hradec, would last for several centuries.
- 3** The wooden bridge was guaranteed to be more practical at times when the city was guarded and besieged because it was easy to destroy and thus close access to the town. When it was no longer necessary to guard the town, the stone bridge represented a more practical option because it lasted for centuries, and neither enemies nor fire could destroy it.
- 4** A simple device resembling scissors was used to move and lift the stone blocks. To prevent the scissors from slipping off the stone block, two small dents were made in the stone.



Figure 1: Source: ŠEFCŮ, O. Architektura: Lexikon architektonických prvků a stavebního řemesla. 1. vyd. Praha: Vydavatelství Grada, 2013, 256 pp. ISBN 978-80-247-3120-9

- 5** Granite was used on more important structures than fortifications, for which “waste” stone. However, economics and aesthetics also played a role. It did not matter if fortifications were “glued” together from ordinary asymmetrical uncarved stones. Similarly, color matching was more important for houses, churches, etc. than for fortifications.
- 6** The gate served as an important security measure at a time when the whole city was built largely of wood. Fires often broke out, and it was therefore necessary to get to the water quickly.
- 7** The reasons were lower costs, easier construction and the better thermal insulation properties of wood.
- 8** The Stonemasons’ Guild was not in the square for sure. The square was “reserved” for other crafts, such as butchers and brewers. Stonemasonry required work at the source and produced dust and noise, neither of which has ever been acceptable in the center of a town.
- 9** The third window on the floor was walled. The fourth window, which is depicted in the sgraffito, is now part of house No. 14, which used to have a unified facade with house No. 15.

- 10** These are high relief columns or pilasters.
- 11** Sandstone.
- 12** The massive column portal of the church is richly decorated. Most ordinary burghers could not afford such elaborate decorations. At the same time, from a practical and aesthetic point of view, burgher houses used simpler portals.
- 13** Since the Baroque style wanted to draw attention to its monumentality, different colored building blocks were often used in churches, such as marble, limestone, serpentine and others. The main altar and side altars are not of stone, but of wood and then painted with a colored patina that mimics natural stone. The reason may be that similarly colored rocks could not be found in the vicinity, and therefore the production of stone elements would be disproportionately demanding and expensive. The baptistery near the main entrance is made of marble.
- 14** Without the cross, the tower measures 50.12 meters.
- 15** It is estimated that the foliage in the Paleolithic Age created in Vysočina a mountain range similar to the Himalayan Mountains, i.e. with elevations between 5000 and 8000 m.
- 16** This precious metal was mined in Dobrá Voda near Mrákotín. Zacharia's income also came from the Havlíčkův Brod ores district, where he acquired some mines by marrying Catherine of Valdštejn.
- 17** Under the plaster of the vault, there is nothing but granite. The altars are no longer stone but wooden.
- 18** This element (milestone) served as a solid stone slat, which prevented the chipping of the corner of the walls when carriages passed by.
- 19** The color of the granite is determined by the content of the minerals forming it and the size of its grains. The granite color is also greatly influenced by the type of feldspar. Granites are generally always light in color, commonly light gray or pinkish. The granite found in the Vysočina Geopark has a blue and brown shade as well.
- 20** The arcade was not only elegant, but also practical, as it allowed artisans to offer goods outside the house.
- 21** The limestone was formed in the warm sea by the accumulation of limestone shells and other body parts of various organisms: bivalves, gastropods, corals, whorls, etc. The limestone used for sculptures is probably the so-called algal limestone found in South Moravia. The most famous occurrences of this type of limestone are in Austria and Hungary, where they were mined in Roman times.

- 22** St. Sebastian is pierced with arrows; St. Jacob appears with a book, a scroll of the gospel, a pilgrimage stick with a shell or a sword; St. Roch with a dog, a stick, and a plague ulcer on his leg; St. John of Nepomuk with five stars around his head, the cross and a palm leaf; St. Francis of Xaver with a lily, the cross, flames or torches; St. Rosalia with a skull and a wreath of white roses around her head, and St. Mary Magdalene with a skull or a bowl of ointment.
- 23** Limestone is considerably less resistant to weathering than granite: weathering, frost, water, algae, lichens and other influences cause disintegration, color change, and overall degradation. Since the second half of the twentieth century, acid rain, which causes intense chemical weathering of limestone, is a major problem.
- 24** The magma reached temperatures around 800° C and the granite solidified at depths of about 10-15 km.
- 25** The Variscan orogeny gave rise, among other things, to the formation of a high mountain range comparable to the Himalayas. Over time, this mountain range "retreated" through erosion, weathering, transport, due to temperature changes, solar radiation, chemical reactions, wind, frost, and water activity, and so the granites came from the original deep depths to today's surface.
- 26** The carriages of the cubes cleared the chips by turning the dice into the shape of the cat's heads. However, this term is used today for any paving made of natural paving stones, whether processed or untreated.

The text was consulted with Karel Malý, Ph.D, geologist of the National Vysočina Geopark RNDr.

Professional literature

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