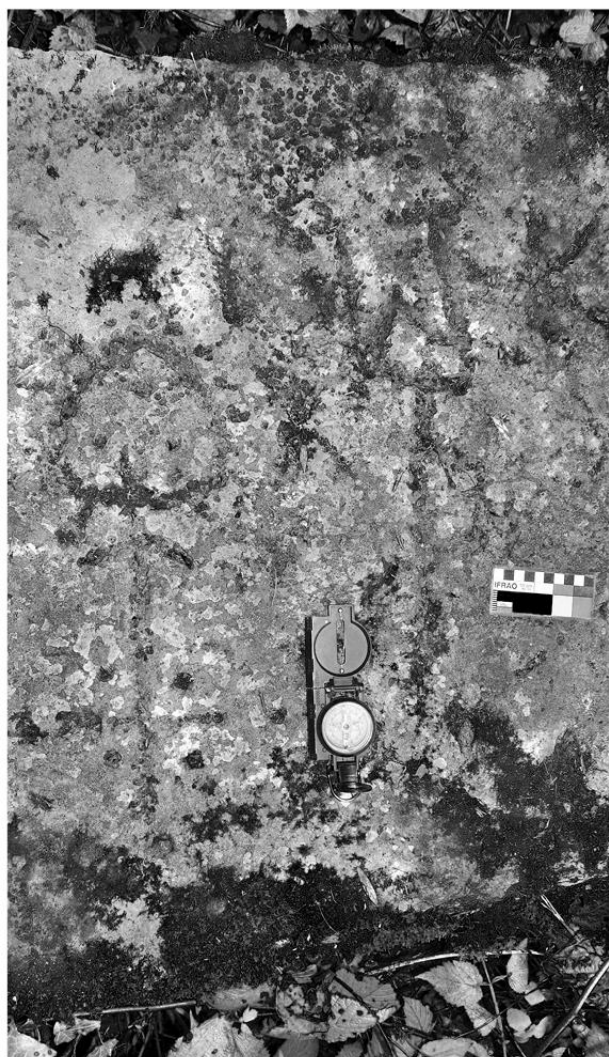


SLOVENIAN ROCK ART RESEARCH ASSOCIATION
SloRARA



FIELDWORK
2021

**Research of rock-art,
megalithic monuments
and
prehistoric heritage
in Slovenia**

Author: Matej G.Dasko



*Sincere thanks to all of you who support our research work,
especially our honorary president, mentor and great supporter
dr. Duško Aleksovski.
who also contributed greatly to the creation of this document.*

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INTRODUCTION

Slovenia is a country with rich and well known cultural heritage from prehistoric period. Nevertheless, to this date no official case of prehistoric rock art has been recorded in the Republic of Slovenia.

It is true that many stone tools from Paleolithic and Neolithic periods were found in Slovenia. However, not even one example of stone tool with decoration has been discovered so far. Not only that, an absence of stone sculptures, both small and large, rock engravings, petroglyphs, rock paintings is also typical for the later periods of prehistory in the Slovenian territory. So, the oldest officially recognized examples of rock art in Slovenia are from the Roman period with which our space enters history. The question that arises for us concerns the circumstances or the cause of such an absence.

In fact, interpretations of rock art from the Roman period and the early Middle Ages are also relatively rare in scientific publications. Among them are three examples of rock art – standing stone with relief depiction near village *Krkavče* in *Primorska Region*; so called *Iapods Cave* on *Snežnik Plateau* above the town *Ilirska Bistrica* with petroglyphs, and stone plate from *Sveta gora* above the village *Bistrica ob Sotli*, which experts date between 7. and 8. century AD and interpret as heritage of newcomers on Slovenian territory – South Slavs. We highlight them because of at least one reason. Our opinion is that the three listed examples of rock art are wrongly interpreted as heritage of South Slavs. The iconography is older and most likely prehistoric. However, if the official dating is true, these three monuments are an example of continuity with prehistoric times due to the iconographic elements that appear in them. In the event that such continuity really exists, we can expect even more examples of prehistoric rock art in Slovenia. This is, after all, confirmed by some new discoveries, which challenge official paradigm about prehistoric rock art in Slovenia.

From 2016 to the present moment, our small group of researchers discovered around fifty officially unknown locations with examples of rock art, mainly petroglyphs. There are also examples of 'cup marks', stones as sculptures and partly sculptured stones. Some of these examples are in the vicinity of the important archeological sites from prehistory, as in *Plački vrh (Plač Summit)*, *Donačka gora (Donačka Mountain)* etc., and most likely related to them.

All our findings were documented in a limited way, without appropriate copies, made 'in situ', including only data about location (documentary photography, GPS and written source, if existing). This is the consequence of multiple circumstances which follow our initiative. Firstly, all researches are processed exclusively on voluntary basis. Secondly, in our team there is only one professional archeologist specialized for Paleolithic, but with lack of experience in the field of Prehistoric rock art. It is also true that in Slovenia there is no such professionals, which is, after all, perfectly in line with the official paradigm. Thirdly, our initiative is opening a new field for Slovenian archeology and so may be strongly opposed by professionals. After all, we are self-taught, lacking the appropriate knowledge and experience in identifying and documenting examples of rock art.

In February 2021, we founded an association specializing in rock art, and this year we also conducted the first systematic field research. The course of the latter and new discoveries are presented in more detail below.

In general, we can say that we are satisfied with the realization in 2021. And yet we have some challenges ahead of us, both old and new, which mainly concern the financing of our current and future activities in the following years.

RESEARCH of ROCK ART in SLOVENIA 2021

FIELD WORK 2021

Main subject of our field work in year 2021 were areas in Slovenia with potential examples of rock art. Our selection of particular areas is based on the following criteria:

- (1) Geological base of the area is made of metamorphic rocks with predominance of schist stone;
- (2) Areas with prehistoric heritage, especially remains from Neolithic period and Cooper Age;
- (3) Areas with preserved ethnographic heritage with reference to rock art;
- (4) Special places such as caves, springs, waterfalls, lakes, geomorphological heritage etc.;
- (5) Locations with alleged examples of rock art, that have been reported to us by others (oral or written source).

Most of the places, chosen by these criteria, are situated in remote regions of Slovenia, some of them accessible only by foot. So it is not surprising, that specific field work may include a lot of walking, sometimes more than 20 km per day. So, our field research was specific and sometimes demanding. Our main goal was to discover and document (GPS, photo, context) unknown examples of rock art. Due to lack of time and proper experience we did not include reproductions of rock art examples 'in situ'.

Realization

In the year 2021 our team had at least 64 days of field research in eight different statistical regions of Slovenia: *Podravska (Podravje Region)*; *Obalno-kraška (Coastal-Karst Region)*; *Primorsko-Notranjska (Primorska-Notranjska Region)*; *Gorenjska (Gorenjska Region)*; *Koroška (Carinthia Region)*; *Zasavska (Zasavje Region)*; *Savinjska (Savinja Region)*; *Jugovzhodna Slovenija (South East Slovenia Region)*.

More specifically, our research included the following geographical units:

- (1) East and central parts of *Kozjak Mountain*,
- (2) Parts of *Pohorje Mountain (Mariborsko Pohorje, Ruško Pohorje, Hočko Pohorje, Slivniško Pohorje, Framsko Pohorje, Bistriško Pohorje, Vzhodna Pohorska planota)*;
- (3) both sides of *Middle Drava Valley*;
- (4) small part of the NE area of *Julian Alps*;
- (5) NE area of *Snežnik Plateau*;
- (6) *Lož Valley*;
- (7) north side of *Upper Drava Valley*;
- (8) west and central parts of *Slovenian Hills*;
- (9) *Huda Luknja Gorge*;
- (10) west part of *Haloze Hills*;
- (11) *Kočevski Rog Mountains*;
- (12) *Posavje Mountains (Vače and Klenik archeological site)*
- (13) *Boč - Macelj Mountain Ridge*.

Team

Matej G.Dasko, Master's Degree of Sociology and professor of art pedagogy; Gregor Volčanjek, Bachelor of Economics; Boštjan Odar, doctorate in archeology; Tihomir Rugani, forestry engineer; Niko Žgeč, Carpenter Technician; independent researchers Iztok Erjavec and Rudi Baloh.

SREDNJA DRAVSKA DOLINA

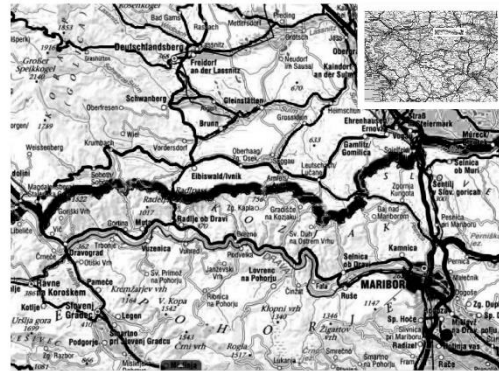
(Middle Drava Valley)

The narrow gorge of the *Drava River* between villages *Fala* and *Brezno* with steep rocky ridges, is today still a sparsely populated area. Steep river banks are overgrown with biotically diverse forest with little logging activity. The geological base is made of metamorphic rock from Paleozoic period including schist.

The area which also represents the climatic, geological and geographical dividing line (between the *Pannonian Plain* and the *Eastern Alps*), also served as a border strip in the past. Due to the extreme terrain, the area is exclusively transitional and of exceptional strategic importance as the shortest natural connection between the *Koroška kotlina* (*Carinthia Basin*) and *Dravsko-Ptujsko polje* (*Drava-Ptuj Field*). This fact is attested by many remains at its eastern and western ends. At the entrance to the gorge from the east there are remains of a medieval castle and nave, slightly deeper there are traces of valley prisons, probably from the late Roman period, old quarries about which sources are silent, prehistoric settlement and many old paths sometimes supported by dry stone walls.

After the collapse of the Roman Empire, the *Srednja Dravska dolina* (*Middle Drava Valley*) area was supposed to be impassable along water and land routes.

Middle Drava Valley Field-work 2021



Field research on the left and right banks of the *Middle Drava Valley* was done in march 2021, mostly in its eastern area.

Three days of field research (up to 10 hours per day) took place on the left bank (north side, eastern part), and further three days on the right bank (south side, eastern part). The main discoveries were expected on the right bank, because there are many unexplained remains which we had known about.

North side, east part

Since here there is mostly extreme terrain, expectations were relatively low. Possible discoveries were expected along the old paths and in locations of special importance in the local oral tradition.



KRANJC CLIFF – Panoramic view from a cliff on Middle Drava Valley and Pohorje Mountain.

So, we took a closer look at the rock formation above river Drava and just below the main summit *Kolarjev vrh* (*Kolar Summit*, 985 m), which is known as a place of special meaning to locals. Decades ago there were celebrations around the summer solstice in this place. In the evening on the feast of John the Baptist (24. June), people gathered near *Kranjčeva pečina* (*Kranjc Cliff*, around 930 m). Then a bonfire was lit, followed by a feast and dancing late into the night. The last such gathering was a good four decades ago.

Although some parts of the rock are most likely formed by man (leveling on the upper plateau), we have not discovered a single engraving. The same is true for the rock formations lower on the ridge and along the old path. In one place it leads through a rock gate that may have been carved.



ROCK GATE - the passage through the rock is at the end of an old footpath that connects the valley and the summit.

An exception is the rock found by the second old path which is about 100 m lower and runs parallel to the already mentioned path. The vertical surface of stone is marked with holes of approximately the same diameter. The holes could be of human origin, and a small niche higher in the stone may have been carved. Finally, it is located along a path, which in some places is supported by dry stone walls and carved into the rock.



CUP-MARKS - Circular recesses between 2 and 6 cm in diameter are located on a surface of about 1 x 1.5 meters.

Field research on the left bank of the *Middle Drava Valley* also included some areas in the western part where, however, our search was unsuccessful.

In fact, we explored an area that was never suitable for settlement. So, we did not expect many finds. We are especially satisfied with the data collected from the locals which concern their attitude towards stone. So we get some precious information about old customs and beliefs manifest in stories of supernatural power of particular stones.

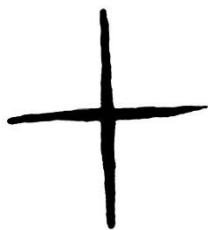
South side, east part

We expected much more on the right bank, specifically in the eastern area with many remnants of the past (valley closure and road built by carved stones, presumably from the Roman period; prehistoric settlement; network of old paths in several places supported by drywall; ruins of larger buildings; at least three quarries), that we had explored in the past. Field research also included some remarkable rock formations along the old footpath above precipices that leads to the top of the *Ruta* (*Ruta Hill*) ridge.



ROCK PIER on RUTA HILL - about 30 m long rock pier, surrounded by precipices and with spectacular views of the Drava River.

The first and second research took place in areas with the remnants of the past. Despite expectations, we found no example of rock art.



CROSS 1 (RUTA HILL)

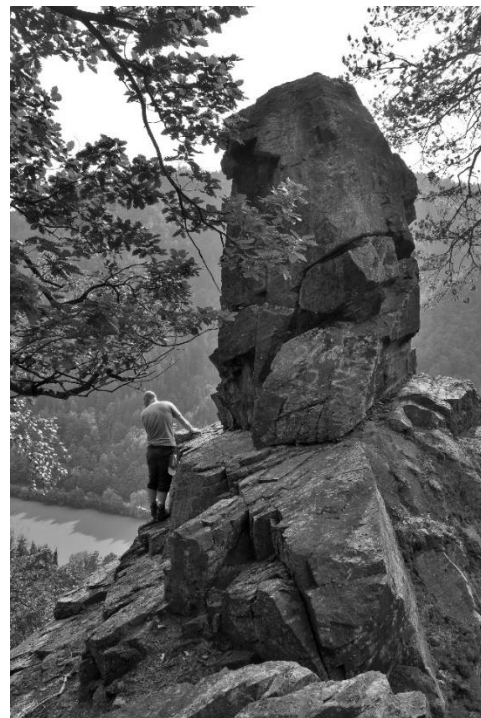
Therefore, the third day of the research was a bit more promising when we found two cross-shaped engravings on a picturesque rock pier with spectacular view of the river bend. In our opinion, rock pier is the most fascinating part of the entire *Ruta* ridge.



CROSS 2 (RUTA HILL) - It is less than a meter away from the cross No. 1



Exceptional rock formations are also higher at the top of *Štibler* (*Štibler Summit*), but without engravings. The mound of crushed stone at *Štibler* is probably of more recent date. Directly below the stone pier is an area covered with larger pieces of crushed stone, among which runs a wide road. It is probably an old quarry unknown in written and oral sources. Below it is an abyssal cliff, the top of which boasts a mighty rock, called *Predla*. The story narrates that the rock was actually a petrified woman. So God punished her for working on a church holiday when it was not allowed.



PREDLA ROCK FORMATION - Under the cliff are the remains of a prehistoric settlement and later Roman fortifications, which controlled the path through the narrow Middle Drava valley.

These turned out to be the only examples of stone art known so far on the right bank of the *Middle Drava Valley*. The symbol of the cross (in one case the Greek cross, in another Latin) appears early in prehistory. However, since there are no more engravings on the rock pier, the crosses may mark the boundary between the private lands. In this case, they are at most a few centuries old.

POHORJE

(Pohorje Mountain)

As a geographical unit, *Pohorje Mountain* is part of the *Eastern Alps*, more precisely, their eastern periphery at the junction with the *Pannonian Plain*.

The Mountain is a geologically diverse area. The foothills are made of old, Paleozoic rocks (schist, gneiss, amphibolite, magnetite white marble...), while the rocks on the peaks of *Pohorje Mountain* are of volcanic origin and younger (Miocene - granodiorite). Due to silicate rocks, the soil at the top of the *Pohorje Mountain* is impermeable and swampy. The peculiarity of *Pohorje Mountain*, so called high peat bogs are reservoirs of water, from which the main creeks of the area flow. The impermeable geological base is also the reason why the creek here didn't dry up even during the greatest drought.

The geostrategic position of the mountain is interesting, especially its eastern part with an exceptional view of the *Pannonian Plain* and especially the part, which was crossed by the *Amber Route* millennia ago. There were two more paths. The first one led along the northern side of the *Pohorje Mountain* through the whole *Slovenian Drava Valley*, and the second route is situated on its southern sides. They connect the *Pannonian Plain* with the *Carinthia basin*.

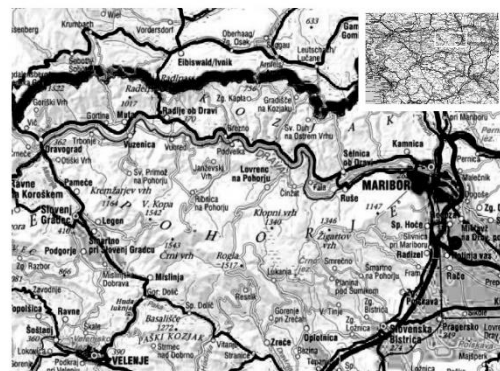
People have lived here since prehistoric times, not only at the foot of the mighty *Pohorje Mountain*, but also higher, on its sunlit ridges. In the past, several dozen prehistoric stone tools (axes, hammers, diggers, chisels ...) were found on the gentle ridges of *Vzhodna pohorska planota* (*Eastern Pohorje Mountain*), especially in the area of *Bistriško Pohorje* (*Bistrica Pohorje* - part of *Pohorje Mountain* above town *Slovenska Bistrica*) with layers of serpentinite.

And there we have at least seven archeologically attested prehistoric settlements, most of them concentrated along and above the amber road route. At that time *Pohorje Mountain* was probably interesting not only for strategic reasons, but also due to natural resources - ores,

wood, wild animals and especially stone. The latter is attested to by the rich Roman heritage, with the emphasis on stonemasonry. On the *East Pohorje Mountain* (*Framsko Pohorje*, *Bistriško Pohorje*, *Vitanjsko Pohorje*) there were many quarries of white marble. In the vicinity of an old village *Šmartno na Pohorju* (*St. Martin on Pohorje Mountain*) were found two votive stones with a relief depiction of *Saxanus*, the god of stonemasons.

Archaeologically, sites from late antiquity and the early Middle Ages have also been documented. After all, we have traces dozen medieval castles on *Pohorje Mountain*, from simple mounds with a wooden tower to more powerful stone designs, such as defense tower of the castle *Kebelj*, which was built on the site of a prehistoric hillfort.

Pohorje Mountain Field-work 2021



We conducted 18 days of field research, during which we explored the following areas of *Pohorje Mountain*: *Vzhodna pohorska planota* (*Eastern Pohorje Plateau*); *soteska Lobnice* (*Lobnica Gorge*), *Mariborsko Pohorje*; *pragozd Šumik* (*protected forest Šumik*); *Bistriški vintgar* (*Bistrica Gorge*) and *Bistriško Pohorje*.

VZHODNA POHORSKA PLANOTA

Eastern Pohorje Plateau

We spent 8 days on specific terrain with plenty of streams, creek and quite a lot swampy terrain. Above the wetlands rises slightly drier and more passable terrain.

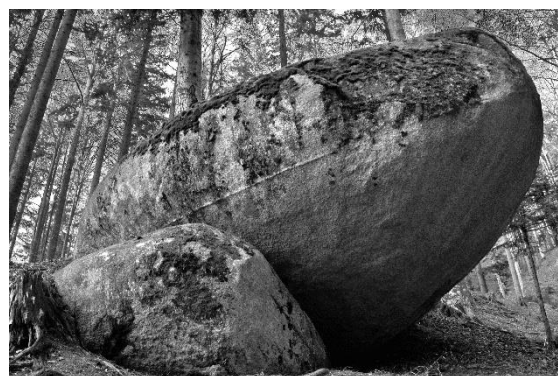


FALA LAKE - Boulders from granodiorite were decades ago under the accumulated water. There is no doubt that boulders were installed here by man. Why and when, we don't know at the moment.

The height of the *Vzhodna pohorska planota* (Eastern Pohorje Plateau) ranges between 1100 - 1350 m above sea level and it covers an area of at least 30 square kilometers. Today it is an uninhabited area and it is supposed to have been the same in the past. No archeological finds are known in this area, as well as no archeological remains. We know from written sources, that around two centuries ago, *Eastern Pohorje Plateau* was overgrown with mighty forest. The only attested settlement that stood on the north edge of the plateau (place named *Bajgot*) was founded in the first quarter of the 19th century, exclusively for forestry work.

Despite the fact, that *Eastern Pohorje Plateau* is officially considered as the area with no archeological traces, our field research has shown a significantly different picture. In some places on the plateau, we discovered larger quantities of crushed stone and unknown formations, made from smaller stones (probably crushed) and larger stones, which look resembling megalithic monuments.

Artificial leveling of the terrain, embankments and probably remains of objects are also visible in some of this areas. Particularly interesting are the locations with mounds, filled with small stones and which, we assume, are graves. Remains of pottery, presumably from late antiquity, were also found on the surface at one of the sites with the alleged burial mounds. The remains are concentrated in several places connected by old paths, paved with smaller stones and in one case with larger stone slabs. These remains unequivocally testify to the occasional human presence in an unknown period of the past.



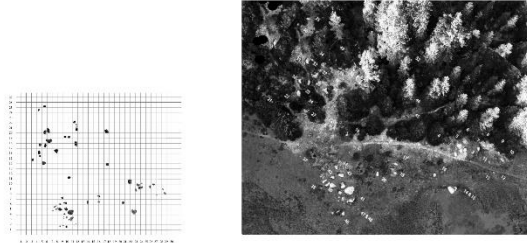
ROCK FORMATION bellow GOMILA SUMMIT is situating in the area of four powerful springs. In the immediate vicinity are smaller rock formations that could be the work of human hands. The top of GOMILA SUMMIT is dotted with mysterious ruins.

Despite many remains we did not find any new engravings in this year's field research on *Eastern Pohorje Plateau*. Otherwise, we have found at least 10 engravings in this area in the previous years, mainly concentrated in its eastern parts. Most of these engravings are probably of more recent date. They represent the marks on the mile stones between the former feudal estates. In most cases, milestone is in the form of an upright stone slab with a consecutive Arabic numeral engraved on one side (capital letters in two cases) and a cross on the other, which can be in Greek or Latin form. But one engraving stands out. We found it on stone surface near the church of *Sv. Areh* (St. Henry) on the eastern edge of the plateau. Our assumption is that this engraving originated in prehistory.

Despite the fact that we did not find new engravings in 2021, we must highlight the discovery of new rock formations, probably man-made, and some processed stones, that can be interpreted in

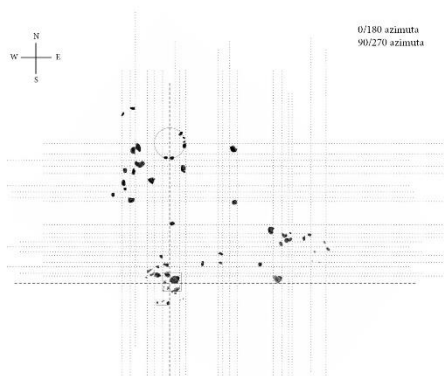
the context of rock art. It is right to present them briefly.

Area of **Falsko jezero** (*Fala Lake*, 1280 m above sea level) is one of these places.



MEGALITHIC MONUMENT FALA LAKE - The original design of the monument is probably larger because the area is overgrown with young conifers and moss. We identified the stone circle only on the basis of an aerial photography.

The *Fala Lake* did not originate in a natural way, but is in fact a former reservoir made in the 19th century for the needs of a water slide. At that time, a group of large stones and formations (53 recorded) was found below the surface of the lake.

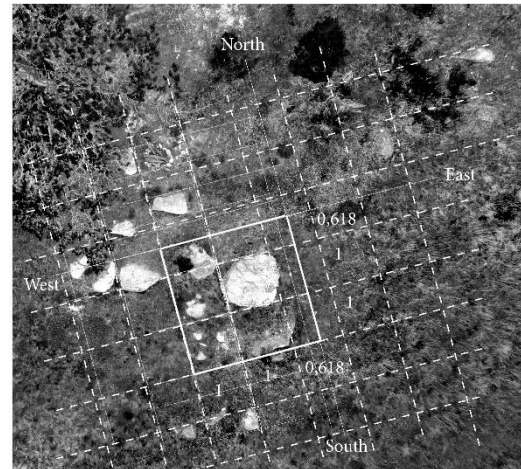


Decades ago, the dam was damaged and the lake disappeared, so big rocks found themselves again on dry ground.



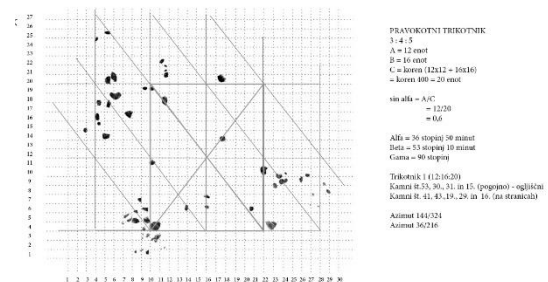
FALA LAKE NR.53 – Rock formation from two stones which are placed on a platform Nr.41, made of earth and a small stone. Platform No. 40 is raised from the ground level by approx. 30 cm and has a square floor plan.

Some of these stones are damaged, but fortunately not all. The preserved pieces show that they were

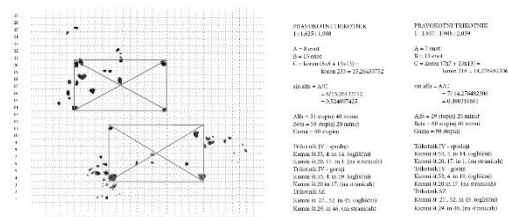


PLATFORM NR. 40 is raised from the ground level by approx. 30 cm, and has a square floor plan. The sides of the square are aligned along the four cardinal directions of the space.

carefully designed and that they include ratios of integers.



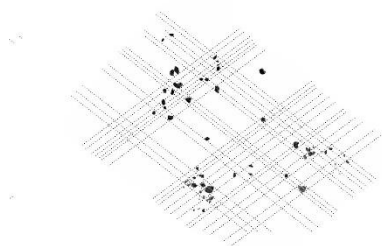
The aerial shots we made showed that part of the layout is also a stone circle, which is mostly overgrown and not recognizable from the ground. Subsequent analysis of the relationships between the 53 stones showed that the whole layout is most likely the work of humans. Each stone was carefully placed in relation to others in such a way, that they form regular triangles (equilateral and isosceles), in this particular case there are over 1500!



Another special feature of this megalithic layout

(floor plan), which testifies about human intervention and also concerns the relationship between the stones, are the orientations to the four cardinal directions of the sky and to the important astronomical turning points of the solar and moon cycles.

54/234 azimuth
126/306 azimuth



These are also the features of some megalithic monuments. Part of the layout is also an exact stone circle of smaller diameter.

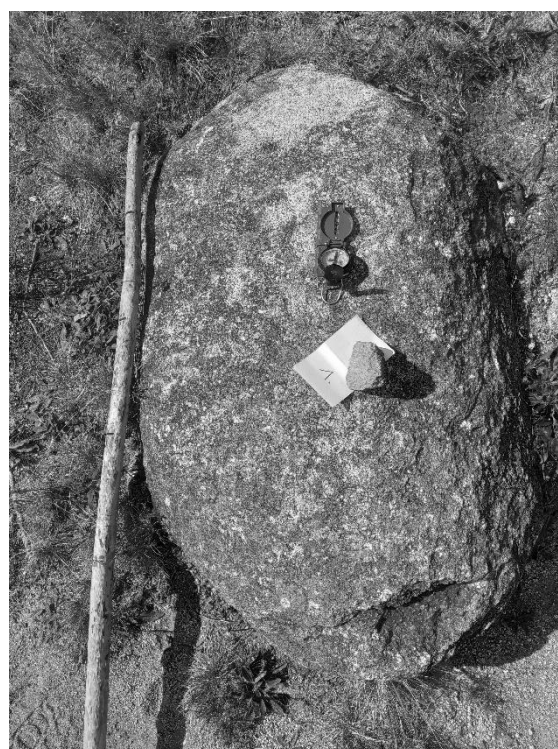


FALA LAKE NR.27 – Granodiorite boulder, whose sides are oriented north-south and east-west. Sides are in a ratio of 1: 1.5. The lengths, however, correspond to the megalithic yard, a measure founded by Dr. Alexander Thom. The first and shorter side have a length of 1 MY and the longer 1.5 MY.

After all, these are remnants that are not typical of Slovenia. According to Slovenian experts, there are no megalithic monuments in our country.



FALA LAKE NR.2, NR.3, NR.5 and NR.6 – Four granodiorite boulders. The distance between No. 2 and No. 3 in the foreground is directed along the polar axis - direction north (above) and south (below).



FALA LAKE NR.1 – Oval shaped granodiorite boulder, Sides are in a ratio of 1: 1.25. The length and width of stone correspond to the megalithic yard (length 1,25 MY, width 1 MY).

Second area with peculiar remains - also not present in the discursive field of Slovenian archeology - is further east, on the top of **Travni vrh** (Grass Summit, 1273 m). Mounds made smaller stones are arranged in concentric circles around the center of the layout - upright stone slabs.



TRAVNI VRH NR 1. - Upright stone slab is situated in the center of an unknown monument, probably ancient graveyard. At least 12 mounds made from broken stones, at least 4 upright stones and 3 complex stone formations. All listed elements were arranged around the central stone in concentric circles.

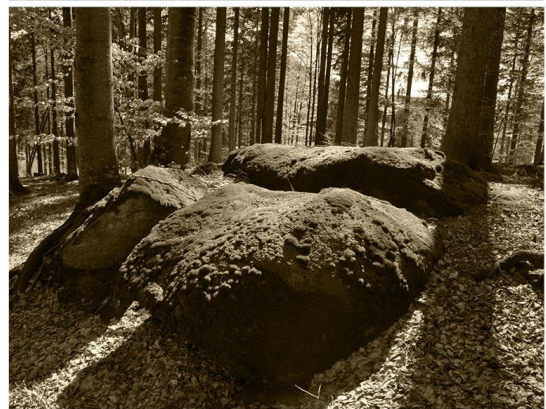
The mounds are arranged around the center in similar layouts with practically the same astronomic symbolism and relationships that we identified in the layout of the megalithic monument at *Fala Lake*. Remains were also recorded on the eastern and southern slopes of the *Grass Summit*.



TRAVNI VRH NR.1(left) and NR.20 – Two upright stones are about 80 m apart and aligned on the equatorial axis (east-west).

Further east is a third area, where remains are concentrated around **Gomila** (*Gomila Summit*, 1192 m) and further along the main ridge in the direction of *Sv. Arah Na Pohorju* (*St. Henry on Pohorje Mountain*). At its highest point, the flat and spacious summit is covered with a thick layer of crushed stone (ruins?), around which are numerous stone formations made of smaller stones (such as mounds, dry stone assemblies, oval-shaped fillings ...). At the southern foot of the *Gomila Summit*, where four streams originate, there are many large stones. It is our opinion that some of the stones are processed and placed in an

exactly specified place, with unknown intention. Preliminary measurements have shown that the most dominant stones are in mutually significant astronomical relations.



GOMILA SUMMIT – At least 10 ROCK FORMATIONS from granodiorite are situating around four springs. Preliminary measurements have shown that the formations at the southern foot of the GOMILA SUMMIT are most likely arranged in proportions of significant astronomical orientations.

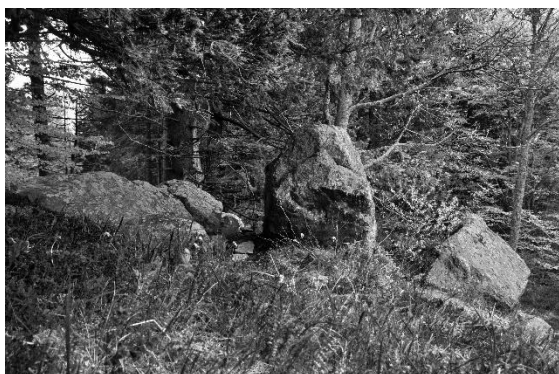
Similar remains, but not in such concentration, continue to the east. Few hundred meters before the geological fault between the granodiorite base in the west and the metamorphic layers in the east there is a larger artificial leveling.



OLD QUARRY east from GOMILA SUMMIT. Traces of the quarry, which are not reported by any source, stretch for several hundred meters. According to our estimates, the quarry area covers around 3 ha. A paved road about 3 m wide with stone slabs is visible for a kilometer, disappearing further east.

Behind the geological boundary there is an old quarry, where a road paved with stone slabs begins. Listed remains are not mentioned by any source so their age is difficult to estimate at this time. On top of that, this area has so far been completely without official archeological finds.

A good kilometer of the air line in the south direction is fourth area, more precisely the southern slopes of **Peršetov vrh** (*Peršet Summit*, 1242 m) with rock formations similar to the previous location, among which mounds from smaller crushed stones predominate. It is also the only site with surface archaeological finds (fragments of pottery) on the *East Pohorje Plateau*, which testify about activity in late antiquity. If there are graves hidden under the stone mounds, then there is a high probability that descendants of the pre-Roman inhabitants are buried here.



MEGALITHIC MONUMENT in the vicinity of the CHURCH of ST. HENRY – central part of megalithic monument which is set on natural rock. From right to left – NR.1 and NR.2 (foundation of NR.1), in the middle NR.3 and NR.8 (in front) NR.6 and NR.10 (back).

The fifth concentration of the remains is located at the eastern end of the plateau, in a place called **Areh**. In the immediate vicinity of the church of *Sv. Areh* (*St. Henry*) there are stone formations and individual large stones, which in our opinion were partially worked on and thoughtfully placed. As already said, one of the stones, most of which is hidden below ground level, has visible linear engravings on the surface, that could be prehistoric.

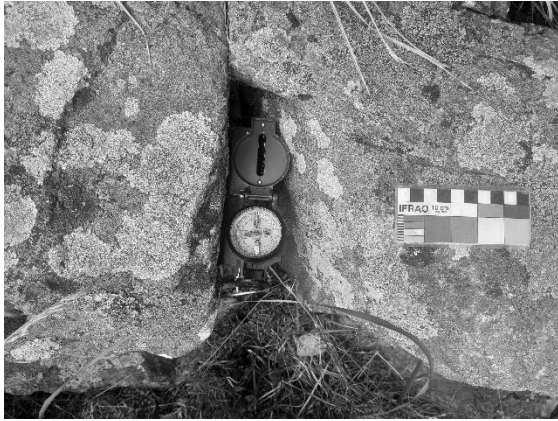


ST. HENRY NR.18 - a smaller monolith made of gneiss, oriented lengthwise along the equatorial line (east-west). The max. length of the monolith is 1 megalithic yard, and the max. width is 1/2 megalithic yard. Therefore, longer and shorter sides are in a 2: 1 ratio.

This year we devoted more time to a detailed inspection of the surface of stones and rock formation, and making ground plan (layout) from the distribution of around 80 stones and the formation will be clearly seen.

We also closely examined stone formation just below the *Sv. Areh na Pohorju* (*Henry Summit on Pohorje Mountain*, 1269 m), which is in the area where we assume a prehistoric settlement was located. It is obvious to the naked eye that the terrain here has been thoroughly transformed. But nobody knows when and by whom. After all, it is the only location on the eastern plateau with officially confirmed archaeological finds. Two stone chisels were found here about century ago. These finds convinced the famous Slovenian historian **Bogo Grafenauer**, that around six thousand years ago and in Eneolithic period, there was a settlement here. Not only was his thesis never officially confirmed - it was strongly rejected by archeologist.

An important upgrade of our research from previous years was the accurate measurements of presumably megalithic shrine. Distribution of big stones around the church of *St. Henry* follows practically the same principles we have seen in the three cases of sites mentioned on *Eastern Pohorje Plateau*. The only difference is that big stones near the church of *St. Henry* are distributed around and on top of natural rock.



ST. HENRY NR.2 - the monolith with a crack approximately in the middle of its length, that narrows exactly in the northern direction, is situated on top of natural rock. A similar wedge crack and with the same orientation was recorded on two more monoliths, is aligned along the polar axis (north-south). Therefore, these 'cracks' are likely to be the work of human hands.

But this natural rock has been modelled in several places, and at least four larger stones with traces of processing have subsequently been placed on top of it.

SOTESKA LOBNICE

Lobnica Gorge

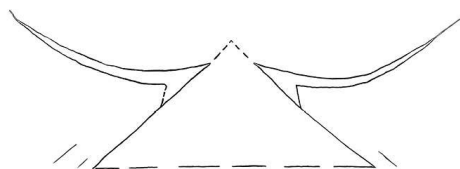
Within 3 summer days we explored the gorge of *Lobnica Creek*, which holds the main headwaters in the peat bogs above, on the already mentioned *Eastern Pohorje Plateau*. Lower part of *Lobnica Gorge* consists of metamorphic rocks that higher up pass into rocks of volcanic origin, granodiorites with different flint contents. Part of this area is also a primeval forest on the right bank of *Lobnica*, and one of the main attractions of *Pohorje*, the *Veliki Šumik Waterfall*. It is the highest Slovenian waterfall on a non-carbonate base with a height of over 24 m.



VELIKI ŠUMIK WATERFALL - with 24 m in height, it is the highest Slovenian waterfall on a non-carbonate geological basis.

We have known about the engraving in the western wall of the waterfall for more than a decade. Engraving in the form of four isosceles triangles was the main reason why we included this area in the fieldwork for year 2021. The whole area of *Lobnica Gorge* is otherwise without official archeological finds, which is quite understandable due to the steepness and northern, shady location. The only remains in gorge are the ruins of wood

saws, and in some places modest traces of wooden slides. Deep in the gorge is the *Reberska koča* (*Reber hut*), the former residence of the wood slide caretakers.



PETROGLYPH LOBNICA 3 – dimensions about 20 cm in width and around 10 cm in height.

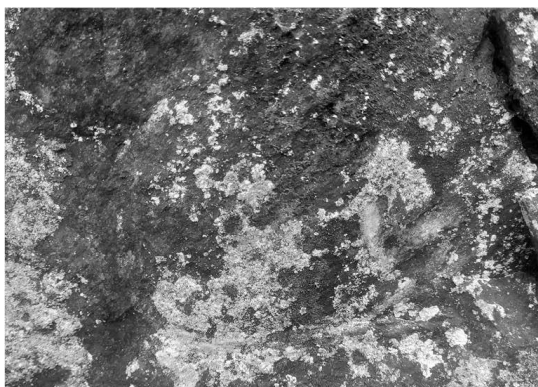
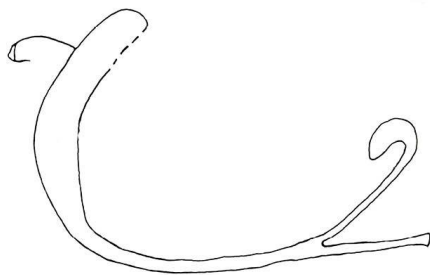
To a certain extent our expectations have been met. As we followed the old forestry trail on the right bank, we discovered three engravings at the site, where the unknown builders of this trail were forced to carve it into living rock and support it with a dry stone wall. Perhaps simple engravings are traces of the builders of this route, or later users of this trail. It is also possible that the engravings are much older. After all, we do not know the age of this trail, which is not attested in written sources. First engraving has the shape of an inverted letter 's', second resembles the letter 'u' with outwardly twisted and split ends, and the third is in the shape of isosceles triangle.

Fourth engraving was discovered higher on the left bank in *Lobnica Gorge*. It is in the form of a straight line with a spiral end, and was accidentally discovered on an extremely steep ridge to which no path leads.



PETROGLYPH LOBNICA 1 – dimensions about 7 cm in width and around 15 cm in height.

A special feature of the upper part of the *Lobnica Gorge*, where engraving in the form of a spiral was discovered, is the predominance of volcanic rocks.



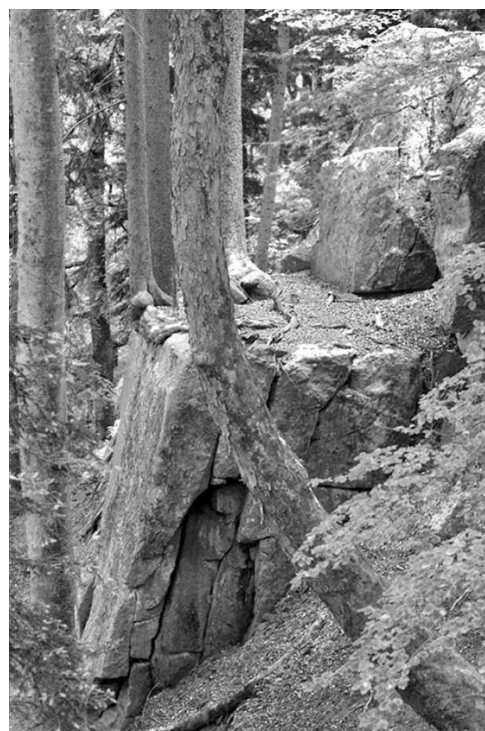
PETROGLYPH LOBNICA 2 – dimensions about 15 cm in width and around 10 cm in height.

Exceptional rock formations were formed from this particular stone. Most likely the origin of these formations is due to natural processes (erosion). Among them there are a few amazing examples, for which we doubt, that they are exclusively the work of nature. In any case, the area with rock formation in upper *Lobnica Gorge* represents a natural specialty that has certainly attracted prehistoric inhabitants of wider area.

Perhaps the engraving in the walls of the *Veliki Šumik waterfall* is their heritage.



Western rock wall of VELIKI ŠUMIK WATERFALL – petroglyph (four triangles, three smaller and a larger one below them) is slightly above half the height of the left half of the photo.



UPPER LOBNICA GORGE, LEFT SIDE - A stunning volcanic rock formation above which a fourth spiral-shaped petroglyph has been identified.

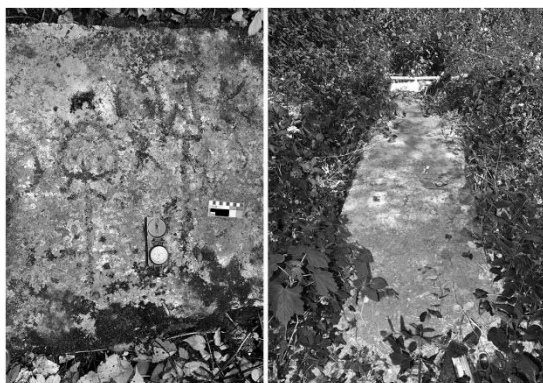
BISTRIŠKO POHORJE

Bistrica Gorge and above it

Another 5 days of field research on *Pohorje Mountain* was reserved for places above the town *Slovenska Bistrica* on so called *Bistriško Pohorje*. Our first target was *Bistriški Vintgar* (*Bistrica Gorge*), where we had accidentally discovered a stone slab with engravings about twelve years ago. The gorge is also interesting because of the layers of serpentinite, a stone from which tools and weapons were made in the Late Neolithic period, and also because of the quarry of white marble, in use since the Roman period. Our research was completed in three days and also covered the area directly above *Bistrica Gorge*, where we have archeologically attested finds and locations from prehistory, the entire Roman period and the Early Middle Ages.

Additional two days of research was completed in the area slightly to the north, around villages *Šmartno* and *Bojtina*. This area is well known for white marble quarries from the Roman period and numerous finds of artfully carved 'white' stones. There are also at least two examples of carved stones, which in the local tradition are considered as places of special meaning.

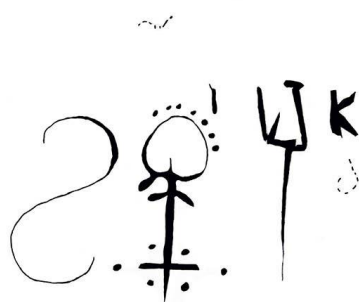
First day in **Bistrica Gorge**, we followed the old path above the Bistrica creek. In the beginning, we recorded an upright stone with a treated surface. Deeper in the gorge are the ruins of two dry-stone buildings.



STONE SLAB from BISTRICA GORGE - stone slab more than 2 m in length and about 3/4 m in width is laid over a masonry canal (dry wall) leading to the water wheel, and thus has the function of a bridge. There is no doubt that the stone was worked on. On the upper surface there are petroglyphs, which we estimate are of different ages. Due to the relatively small

depth of the canal we were not able to inspect the opposite surface of the stone slab.

Higher up and also by the old path, there are at least five visible ruins in one place. Here the bed and the edges of the Bistrica creek are paved the length of more than 70 m. From the main riverbed a side channel was built in the direction to one of the buildings. Over the channel around 2 meters long and about 3/4 meters wide stone slab was laid, obviously functioning as a footbridge. In the upper surface of the stone slab are the already mentioned engravings.



The already recorded PETROGLYPHS on a STONE SLAB from BISTRICA GORGE are at the same time the largest petroglyphs are aligned in height with the polar axis (south below, north above). There is also the letter 'k' on the surfaces and smaller engravings from the dashed line. Other engravings not visible in the photo are smaller.

This time we cleaned the plate completely and found new engravings. Noteworthy are those in the form of successive lines and small circular holes between them. The stone slab also has an engraving in the shape of an inverted letter 's', as in the *Lobnica Gorge*, except that it is of larger dimensions.

Less than a hundred meters higher is a white marble quarry, which is said to have been in use during the Roman period. Some engravings are

visible in the walls of the quarry, but only the recent ones. Inscriptions of names dating back to the second half of the 19th century.



Newly discovered petroglyphs PETROGLYPHS on STONE SLAB from BISTRICA GORGE - These engravings were located below the vegetation that had overgrown the eastern end of the stone slab. Some engravings, mostly letters, are still on the west end of the plate.

There may be more engravings, but they are not visible due to poor light in this part of the gorge.

Higher up in *Bistrica Gorge*, we inspected the area of the picturesque *Šum Waterfall* and then practically the entire gorge, but unfortunately without similar finds. The area above the gorge with at least four protected archeological sites from prehistory onwards, has proved to be no better.

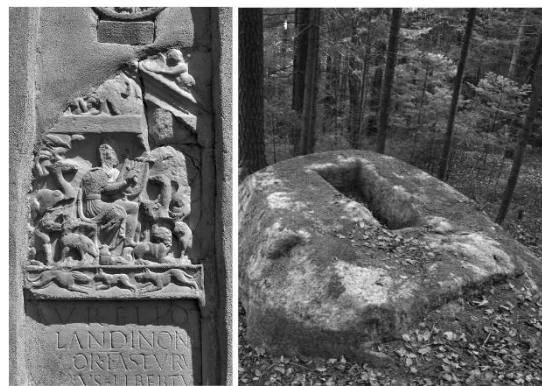


QUARRY OF WHITE MARBLE in BISTRICA GORGE, which was in use as early as the 1st century AD. or in the early Roman period. In addition to the newer ones, the walls also have some engravings from the 19th century.

We spent 2 additional days in the area, beginning north above *Bistrica Gorge*. More precisely, the first day around old village **Šmartno na Pohorju** (*St. Martin on Pohorje Mountain, 777 m*), and the second day in extensive area of solitary farms, named **Bojtina**. Both

areas are known for its white marble quarries and rich remains from the Roman period. Many of precious carved white stones from the Roman period were discovered in the area of the village of *St. Martin on Pohorje Mountain*. Some of these Roman stones were built into the walls of the old parish church of *St. Martin*, including a tombstone with a relief depiction of *Orpheus*, which belonged to a former tenant of the *Aurelius* quarries. Changes in geological basis are similar to the already mentioned areas. Above the layers of white marble there are rocks of volcanic origin, merely granodiorite, which by definition contains at least 20% quartz. In the end, it turns out that the most surprising finds are situated in an area with granodiorite. But history is silent about these impressive rock formations. Fortunately, oral tradition has 'more to say' about them.

Above village *St. Martin* is stone formation, about which various stories circulate. So called '*Devils Trough*' consisting from two big stones. A smaller block of the granodiorite stone is placed on a larger block of the same stone, and a trough (approx. 1 m long, 40 cm wide and deep) is carved into its upper surface, which is said to be the work of the devil. It is speculated that the trough may have been used to feed livestock, which is unlikely because it does not hold water.

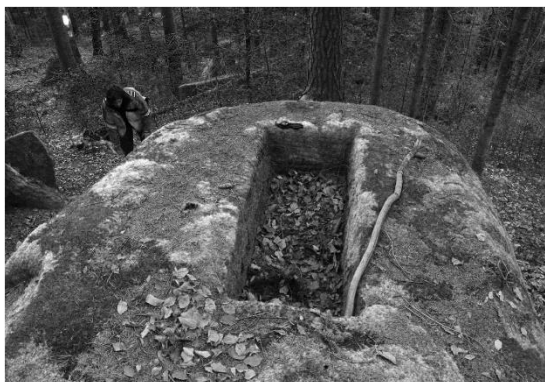


ORPHEUS MONUMENT, Roman tombstone with relief depiction and inscription field (left), right DEVIL'S TROUGH.

In the immediate vicinity are some other rock formations that could be the work of human hands, and stones of special shapes, such as three-sided pyramid.

With the location of the *Devil's Trough* begins an extensive area with numerous stone

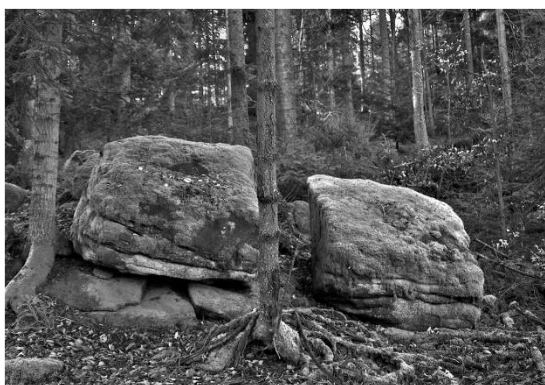
formations made of granodiorite. The most numerous are in the areas of *Smrečno* and above *Bojtina*. Among them are at least ten stone formations showing traces of processing. One of them, which is at most 500 m away from the *Devil's Trough* and in higher terrain, was designed as a seat, most reminiscent of a comfortable armchair.



DEVIL'S TROUGH - the trough measures about 130 cm in length, about 50 cm in width and a good 40 cm in depth. It is directed in the direction of the point of the summer solstice sunrise, and in the opposite direction to the point of the winter solstice sunset.

The base is shaped like a rectangle and the vertical sides are oriented in the cardinal directions of the sky.

In a large area we came across very similar stone formations in different places. We listed about 7 upright stones in the shape of a three-sided pyramid. Preliminary measurements have shown that their sides have significant astronomical orientations (cardinal directions of the sky, turning points of the solar and lunar cycles).



'TWIN STONES' - the intentional gap between monoliths of similar dimensions has an astronomically significant orientation - the winter solstice sunrise - the summer solstice sunset. Along with this formation, there are some other monoliths that could

be - including the twins - part of a more complex megalithic monument.

Since we found stones of a similar shape and with astronomically oriented sides in other areas of Slovenia, we conclude that they are the work of human hands. More specifically said, they were processed and, after consideration, precisely placed in the chosen place.



'STONE THRONE' - The throne is located some 10 m above water springs. The junction of the front and left sides of the monolith symbolizes the spatial cross - the front side is aligned in the direction north - south (from left to right), and the left station is east - west (east is on the horizon). The right side deviates from the ideal direction by a few degrees. It may have been subsequently injured. As in the case of the twins, there are other stones around the stone throne, all of which may be part of a more complex monument.

Another special form, discovered in this area, are pairs of stones of similar dimensions and shapes (at least 7 examples). The notch between the 'twin stones' is directed to a point on the horizon, toward astronomically significant event. Preliminary measurements have shown that the notches as a rule align toward significant astronomical points in the horizon (four cardinal directions of the sky, the turning points of the solar cycle - the equinox, winter and summer solstice). In one of the many creeks in the area, we found a granodiorite cylinder about a meter long and about 30 cm in diameter, which is no doubt

carved.

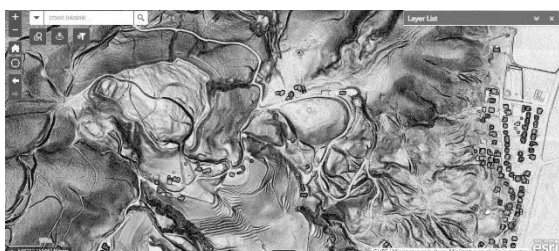
In general, here are many, but not so obviously processed stones in the area. The highest concentration of granodiorite blocks is around *Robnikov kogel* (*Robnik's Summit, 1106 m*), above the church of *Sv. Uršula, Bojtina* (*St. Ursula, Bojtina*). Unusual stories have been woven around these locations over the centuries. The most striking slope formations are considered to be places of encounter with supernatural beings, whether they are the devil or a 'pastor who is not a true pastor'. We also heard about the rock, which is said to have the footprint of *St. Mary* on it. This particular rock is somewhere north bellow village *St. Martin*, but we didn't manage to find it. Rocks with a similar story and a hollow in the upper surface of the stone reminiscent of a footprint, have so far been found in two places in Slovenia (*Ljubična, Zbelovo* and *Marija Snežna, Črnotiče*).

Despite numerous stone formations and individual stones, including processed cases, we have not find any engravings so far at areas of *St. Martin* and *Bojtina*. However, the following should be highlighted. At least half of the stones are covered with moss, which we did not remove during the visits. So there is a possibility, that we also missed something.

SEVEROVZHODNO POHORJE

North-East area of Pohorje Mountain

We conducted 5 days of field research on northeastern part of *Pohorje Mountain*, more precisely, on its final ridges, which in east converge into the plains of the *Dravsko-Ptujsko polje* (*Drava-Ptuj Plain*), and in the north to the *Lower Drava valley*. Geological ground is mostly of metamorphic rocks from the Paleozoic. The ridges are relatively flat and wide, with many sunny days in the winter months, when the plain and valley below is shrouded in fog. So, the living conditions are therefore very favorable, which is ultimately reflected in the fact, that this part of *Pohorje Mountain* is relatively densely settled today.



MULTI-PERIOD ARCHEOLOGICAL SITE POŠTELA – LIDAR a photograph of the relief above village Razvanje, which shows the defensive embankments of the settlement, mound necropolis and a complex system of paths. The area was most densely populated during the Early Iron Age (between the 8th and 6th centuries BC).

Therefore, it is not surprising that we find herea high density of archeological sites from prehistory to the Middle Ages. Rocks are mostly found in narrow gorges and on the backs of ridges, where there are also few abandoned quarries.



KOS'S MOUND GRAVE - the circumference of the grave is about 200 m, today's height is about 5 m. The tomb, built with the drywall technique, was used as a wine cellar at the end of the 19th century.

Possible examples of stone art were expected in the mentioned places. So, our field research was also carried out in the wider area of the *Poštela*, prehistoric complex (settlement and necropolis) and similar locations further south (*Čreta* and *Šestdobje*, two prehistoric hillforts; mound necropolis in *Pivola*, unknown hillfort on *Hočko Pohorje*). We also looked for the so-called 'White Stone', a medieval landmark between the possessions of the city of *Maribor* and the *Limbuš* lordship, and a rock with the carved emblem of the city of *Maribor*. Both stones are cited in written sources.



The so-called 'KERNWERK' is the highest point of the Poštela hillfort. At this point, the earth embankment reaches a height of about 12 m.

We could say that we did not find exactly what we were looking for. There was not even one case of rock art. We may have overlooked the city emblem, which is supposed to be carved into the rock along the old forest path to the top of *Mariborsko Pohorje* (*Maribor's Pohorje*).



MOUND-GRAVES NECROPOLIS PIVOLA

However, we found the *White Stone*, a few meter large quartz monolith, and possibly prehistoric circular design structure that later served as a quarry. This officially unknown structure is partly dug into the foot of the hill and partly filled with crushed stone. The structure is reminiscent of the earth cult structures of the late Neolithic Lengyen culture.

KOZJAK

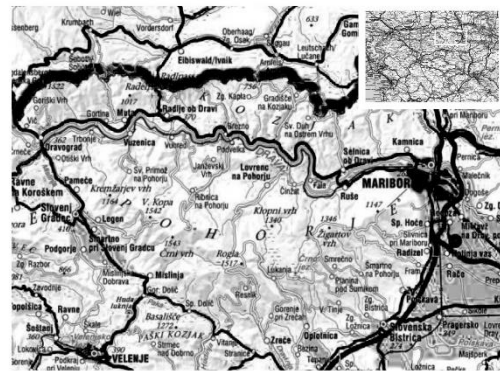
(Kozjak Mountain)

A mountain on the northern side of the *Drava Valley* starts with ridges on the south-east side above the village of *Kamnica* a city in the vicinity of *Maribor*. On its west side, *Kozjak* (or *Kobansko*) *Mountain* ends with the ravine of the *Mučka Bistrica* creek, which flows from *Koralpen* on the Austrian side of the border.

The geological structure is mostly of Paleozoic rocks, which are considered to be the oldest in Slovenia. Smaller patches of dolomite and limestone, then marl, sandstone and conglomerate are also found in the area. Toward the west is an area around village *Remšnik*, rich with precious metal ores and partly preserved mine shafts. Exploitation of silver ore in this place is first mentioned in the written sources from the 16th century. The only known archeological sites on *Kozjak Mountain* from Early Iron Age (Hallstat Period) are exclusively in this area.

It is worth mentioning another prehistoric site few kilometers westward. It is a karst cave with archeologically confirmed traces from late Paleolithic. With this cave, named *Herkove peč* (*Herk's Cliffs*), we have already mentioned all known archeological sites on *Kozjak Mountain*. Compared to the neighboring *Pohorje Mountain*, the number is small, although the living conditions are even slightly more favorable in *Kozjak Mountain*. Maybe the relatively small number of known prehistoric archaeological sites here is the result of poor knowledge of the terrain, which is quite diverse and opaque. The main paths cross the mountain through the gorges of the largest creeks, connecting the *Drava Valley* with *Graško polje* (*Graz Field*) and the *Koroška kotlina* (*Carinthia Basin*). Next to these main routes mighty castles once stood.

Kozjak Mountain Field-Work 2021

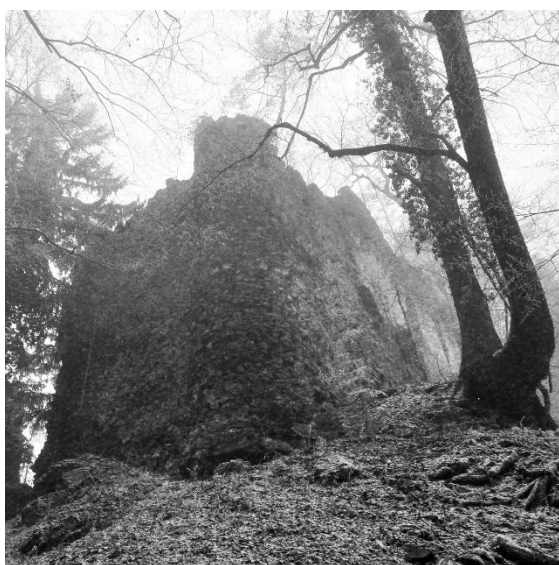


We conducted 15 days of field research, during which we explored the following areas of *Kozjak Mountain*: *Šober*, *Žavcarjev vrh* (*Žavcar Summit*), *Spodnji* and *Zgornji Slemen*, *Veliki Boč*, areas around village *Sv. Duh na Ostem vrhu* (*Holy Spirit on Sharp Summit*), *Herkove pečine* (*Herk's Cliff*), *Perkolica* (*Perkolica Hill*), *Grajski hrib* (*Castle Hill*) and the area around village *Remšnik*.

VZHODNI KOZJAK

Eastern areas of Kozjak Mountain

Within the frame of this year's research we focused on old transport connections, then areas with a higher concentration of stone, and finally areas with remnants of the past that do not officially exist. Officially, there is no archeological site from prehistoric period in the east part of the mountain. The only protected areas are along the old path, leading through the gorge of *Bistrica creek* (*Bistrica Gorge on Kozjak Mountain*). Here are two mighty ruins of medieval castles, first mentioned in the 12th century (*Castle Wildhusen* and *Castle Schmirnberg*).



CASTLE SCHMIRNBERG - The ruins of the once mighty castle are surrounded by three defensive ditches. Access to the castle is protected by two defensive moats. A large defensive tower (i.e. 'bergfried') was erected above the inner defensive moat.

Our opinion is that the existing archaeological picture of the area needs to be thoroughly supplemented. In recent years and only in *Šober area*, we have discovered visible remains of three prehistoric settlements (planned terrain, defensive embankments and ditches, artificial ramps), and the fourth settlement further west in area immediately below *Žavcarjev vrh* (*Žavcar's Summit, 915 m*). The areas of the four alleged settlements, including the paths leading to them, were explored in more detail also as a part of field research in 2021. We also inspected the wider area in more details

around the ruins of *castle Wildhusen* and above (*Spodnji* and *Zgornji Slemen*).

Within the framework of 10 field researches in east areas of *Kozjak Mountain*, we discovered some examples of modelled rock formations, which, however, are without recognizable engravings. The main path, leading uphill from the '*Šober dvor*' in the gorge to the supposed prehistoric hillfort above, was carved into living rock in two places. Next to the higher 'rock gate' is a formation on which there are traces of processing. Its pointing end, protruding from the formation is directed exactly to the east (90 azimuths), where the horizon is not blocked by any hills. Along the way there is also around 12 m high cliff. A few meters high flat wall above the path ends with a spacious terrace. As there are two more similar terraces higher up, the rock from the side view is slightly reminiscent of stairs. The highest terrace at the top of the rock is joined by an old footpath on the east side. At the base of the rock there is a formation, that may have been partially modelled.



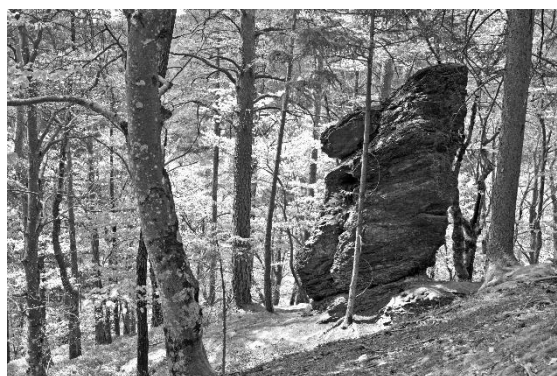
The stone formation under one of the prehistoric hillforts in *Šober* consists of four stones. The formation has interior space with an opening that is pointing exactly to the point on the horizon, where the sun rises on the day of the winter solstice (in the photo).

The example of second alleged hillfort from Šober, a good kilometer north by air, has similar access. That means that above the main path there is also a cliff of similar height and terraces on different height levels. In addition, there is a small cave just below the top, which ends with a rock window. Rock surface on both sides of cave entrance are perfectly flat, as properly vertical rocky wall on the west side of cliff. Highlighted parts of the cliff give us impression, that they were processed. Near the east base of the cliff there is a rock formation consisting of 4 stones. The three stones that were probably placed one on top of the other, carry a stone slab that, on the other side, rests on a rock base of a cliff. In the direction of the south-eastern horizon, the interior of the rock formation is directed exactly to the point of the winter solstice sunrise.

This assumption, based on preliminary measurement, was confirmed by photography of the sunrise on 21.12. In the western part and near the top of the cliff there is a wall with a completely flat surface, which is aligned with the Polar Axis (north-south, 0-180 azimuth). Stairs are carved into the northern edge of the rock enabling an elegant descent from the top of the cliff. Part of this archeologically interesting area with an alleged hillfort at the top is also a small quartz quarry. The latter is not mentioned either by written sources or traditions. This fact, after all, also applies to glassworks, which obviously weren't present in Šober area.

We did not find similar examples of partially modeled cliffs in the area around the third and fourth alleged hillforts. Rock formations around the *Gromov vrh* (*Thunder's Summit*) hillfort mostly show completely natural features. Most of all, our attention was drawn to the unusually large blocks of stone on the steep slope, which, however, are without engravings.

With the exception of crushed stone, the geological base of the fourth location is mostly below ground level. There is much more stone on the surface on the southern slopes of *Žavcarjev vrh* (*Žavcar's Summit*). Along the old path, situated in one of the southern ridges, which in some places is built of crushed stone, we discovered an upright solitary rock about 4 m high.



A rocky outcrop along an old path that is partly carved into its foundation. It is located in the middle of a steep slope below the Kolmanišer farm.

The old path runs so close along the rock that part of the latter had to be removed. It turned out to be an upright rock without engravings. It is located in the middle of a steep and opaque ridge, but exactly at the point, where the view opens to an observer in a southerly and south-westerly direction. In the southeast direction, the view is slightly opened by a small ravine, enough for the rays of the rising sun during the winter solstice, to penetrate through it and illuminate the stone.



Old path supported by a dry wall in a side ravine below a rocky outcrop. A side path branches off from this road, climbing in serpentine to a rocky outcrop and higher.

Interesting rocky outcrops, but without engravings, are also in the steep western slopes of *Žavcarjev vrh*, which descend into the valley of the *Bistrica Creek*. The field research of the ruins of *Wildhusen Castle* (*Viltuš*) and its surroundings was also without results.

CENTRALNI KOZJAK

Central areas of Kozjak Mountain

In the heart of the *Kozjak Mountain*, where the summits reach the highest altitude, we examined in detail the area around the village of St. Duh with many interesting rock formations, then the gorge of *Bistrica Creek*, the ruins and surroundings of *Castle Schmirnberg* ('*Žlemberg*'), and finally the *Vurmat* area west of the village of *Sveti Duh* (*Holly Spirit*).



Village SV.DUH NA OSTREM VRHU (Holy Spirit on Sharp Summit) is an area with a special geological composition, which is not found elsewhere in Kozjak Mountain. there are four different geological bases in the area.

Within the frame of this particular field research, which lasted 3 days, we discovered some potential examples of rock art, more specifically in the form of modeled rock formations and individual stones with archaeoastronomic characteristics, but without engravings. All rock formations are located around the village of *Sveti Duh*, where the old faith in the power of stone is preserved. The geological composition of the soil here is atypical for *Kozjak Mountain* - dolomite and limestone. A few dozens of rock formations are located in the upper regions of the three distinct summits. On the western summit, named *Ostri vrh* (*Sharp Summit*, 903 m) and next to the 'miracle stones' (as described by folk tradition), the pilgrimage church of the *Holy Spirit* was built in the 17th century. The church stands on the ground of a pre-Christian sacred place. Even today, at *Easter*, pilgrims break the chips of these stones with the belief that they possess miraculous powers of fertility. Namely, if they are buried in the field, the harvest will be rich. Aerial

photographs have shown that the main stones at the church, which are slightly raised towards the level of the summit, are arranged in the shape of a heptagon. Inside of it there is one of the three chapels that stand next to the church.



Some of the 'miracle stones' a few meters NW from Church of Holy Spirit, which are still the object of worship today. The stones in the photo represent the SE part of the heptagon.

A few meters in the north-west direction from the heptagon there is the largest stone, which completes the platform with the heptagon as some kind of pier. The largest stone is directed towards the end of the top plateau where the second chapel stands on a rock base. We assume, that before the chapel, a stone stood here as an element of the original layout. If we look from the center of the heptagon, the chapel marks the point where the sun sets at the summer solstice.



Monolith (left) bellow East Summit (903 m) and formation, consist from 6 monoliths at the top. If we look at this formation from the north (the photo shows the view from the east), it has the shape of horns.

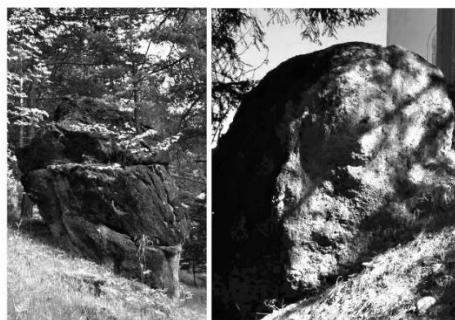
It is also worth mentioning the rock formations on both summits eastward. Summits are aligned exactly in the east-west direction (90-270 degrees), which is a completely natural feature. At the top of the *Central Summit* (927 m altitude) is

a puzzle of four big boulders, surrounded by a ring of smaller stones a few meters below. Around the top there are other rock formations lined up, which are in relation to the highest point of significant astronomical relations. Although these are merely the results of preliminary measurements, we have definitely identified a similar distribution of stone formations and individual stones in the ground plan. Just like the ground plan at *Fala Lake*, *Grass Summit*, *Gomila Summit* and in the area of *St. Areh*, villages *Šmartno* and *Bojtina* on *Pohorje Mountain*. Unlike the *West Summit* or *Sharp Summit*, the *Central Summit* and *East Summit* are overgrown with coniferous forest. So, aerial photographs of the layout on both summits couldn't be made.



ROCK FORMATION on top of CENTRAL SUMMIT consists of four monoliths. In the middle, formation has an empty space and openings with astronomically significant orientations.

In the area there are also three examples of large stones resembling human heads, as well as other stunning formations. Such as the 'stone horns' which represent the top of *East Summit*, the eastern peak. Between the two horns the sun rises at the winter solstice, and at the same time over one of the 'stone heads' south-west below the *Central Summit*.



'STONE HEADS' - the left one is located below the CENTRAL SUMMIT, the right one, which is also part of the heptagon, on the WESTERN SUMMIT.

Despite all these discoveries, we have not found any engraving. They may be hidden under moss which in some places overgrows the surface of rocks. But most likely, they are not there at all, because the stone is not the most suitable for engraving. The other mentioned areas were completely without examples of rock art (engravings, modeled rock formations and individual stones...). At the end, it is worth mentioning the top of *Viltuš* (*Viltuš Summit*, 830 m) northwest below the village of *Holy Spirit*, where quartz was mined more than a century ago.



'STONE HORNS' at the top of EAST SUMMIT- Between the horns there are smaller monoliths that cover the intermediate empty space. From both the north and the south side of the formation there is an opening of approximately square shape. The distance between the openings on the north and south sides is about 2 m. Between them there is empty space, which rises in a south-northern direction with a slope of around 40 degrees. Since the intermediate empty space between the 'stone horns' is directed between 355 degrees NW and 20 degrees NW, the view through the south window is directed toward the sky sector with the North Pole point.

In the coming years, we plan to explore the areas of central *Kozjak Mountain*, which we have not been able to visit this year (around the village of *Kapla*, *Javnik* area...).

ZAHODNI KOZJAK

Western areas of Kozjak Mountain

We already mentioned the fact, that all officially recorded prehistoric archaeological sites are situated exclusively in the west areas of *Kozjak Mountain*. Two of them, dated in the Early Iron Age (s.c. Hallstat Period), are situated in the area around village *Remšnik*. The area is rich in various ores and minerals (silver, copper, iron, graphite, malachite, chalcopyrite ...).

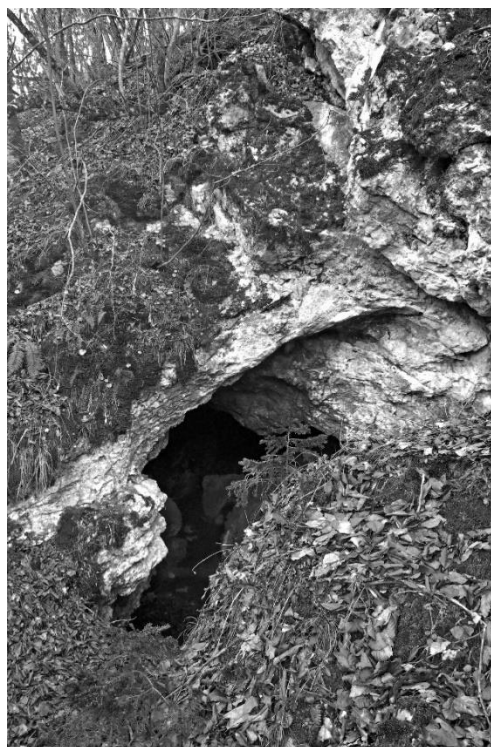


The abandoned silver mine above the old village of Brezno in the Middle Drava Valley and SW of the village of Remšnik was in use as early as the 16th century. Today, the mine is considered as natural heritage due to the many minerals (more than 70) found in abandoned mine shafts, carved into living rock.

Further west the geology changes. In the area, now with limestone and conglomerate, is the picturesque karst gorge of *Suhi Potok (Dry Creek)* and a few karst caves. One of them is very important. Inside *Herk's Cliffs*, stone artifacts from Late Paleolithic have been found. It is so far the only cave in whole area of north-east Slovenia with such findings. The cave, named after the land owner **Herk**, is said to have served as an occasional hunting lodge, but was never inhabited.



HERK'S CLIFFS - a view of the entrance hall of the cave, on the ceiling of which are the supposed petroglyphs.



HERK'S CLIFFS – The entrance to the karst cave is in a precipice. The cave is about 60 m long, while the research covered two halls at the entrance to the cave, the two largest spaces, which nevertheless represent less than half of it.

As part of a two-day field research, we also visited the cliffs of *Castle Hill* above town *Radlje ob Dravi* and the area with the remains of the medieval *Castle Marenberg*.



The remains of the CASTLE MARENBERG, first mentioned in the 13th century, reign on top of the precipices above the town of Radlje ob Dravi.

Finally, we were in an area that is not typical for *Kozjak Mountain*. The area above the karst gorge is densely dotted with huge boulders. The largest, standing upright, reaches the height of just over 15 m. The impression given by the view of the whole is exceptional, so it is surprising that the area is not protected as a natural feature. It is

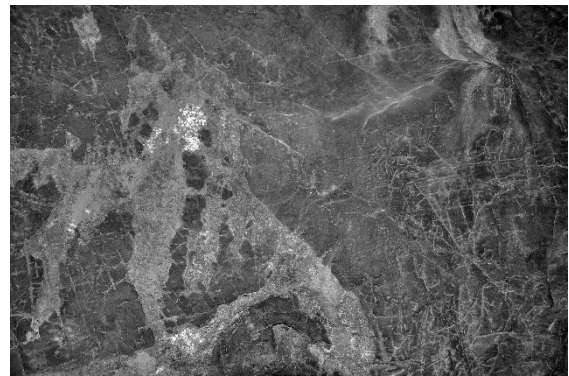
quite possible that the peculiarity of this place has attracted people since prehistoric times. The already mentioned *Herk's Cliffs* are less than a kilometer toward east.

The first important discovery doesn't concern prehistoric rock art. On *Castle Hill* above town *Radlje ob Dravi*, we identified traces of a hitherto unrecorded hillfort, supposedly from prehistoric period. Subsequent viewing of LIDAR image of the hill showed on its west side distinctly terraced area.



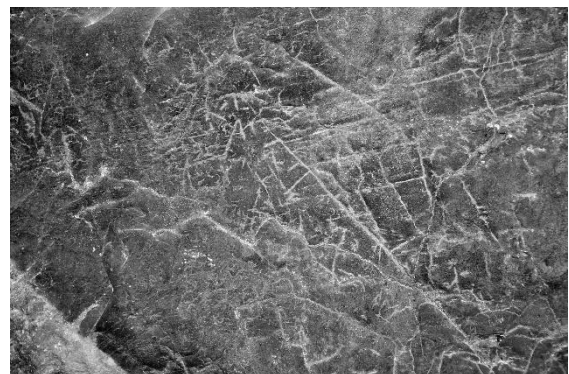
CASTLE HILL above RADLJE OB DRAVI - the relief photographs show the remains of Castle Marenberg at the top of the hill (right in the middle), and on the left next to it the settlement terraces, which most likely indicate the existence of a prehistoric hillfort that has not yet been discovered in this area. The alleged prehistoric settlement reigns over the gorge and pass Radelj, which has obviously been an important traffic connection with the Graz basin on the northern side of Kozjak Mountain already in prehistory.

The second and also discovery, relevant in context of prehistoric rock art, was the cave *Herk's Cliffs*. On the cave wall and ceiling just above the entrance, we discovered a dense interweaving of relief lines, that could represent a prime example of prehistoric rock art. The main problem in this case proved to be the accessibility of the alleged engravings, which are high on the cave wall and ceiling. Today they are a few meters above the ground level. We also identified an image in the wall that most resembles an animal (goat?). We were informed about this particular engraving years ago by a local woman. On this occasion, she drew an



HERK'S CAVE CEILING with the supposed PETROGLYPHS - The engravings in the form of an animal is poorly visible because there are many similar lines around it. The impression is that engravings were created sequentially, which does not necessarily mean that they are the work of human hands.

reproduction, very similar as original, as we saw it in year 2021 on the ceiling inside cave *Herk's Cliff*. In the next hall deeper in the cave, we have not identified similar engravings to those in its entrance part.



HERK'S CAVE CEILING with the supposed PETROGLYPHS – DETAIL

The cave reaches even deeper, but due to lack of equipment we did not explore further. If there are actually prehistoric engravings in the cave, we will check next year when we visit the site with more suitable tools, and hopefully, in the company of prehistoric rock art expert.

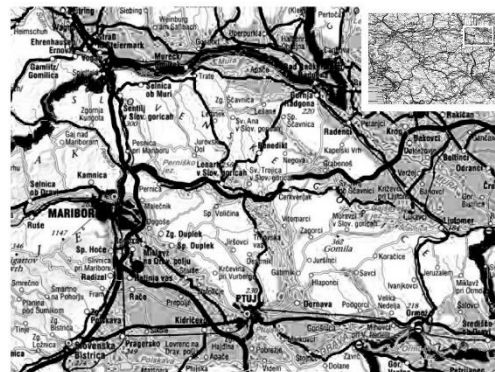
SLOVENSKE GORICE

(Slovenian Hills)

Hills between the rivers *Mura* in the north and *Drava* in the south, two primarily *Alpine* rivers, geographically belongs to the *Pannonian Plain*. The geological base is made of the alluvium of the former *Pannonian Sea* (sandstone, marl, shell limestone) and river deposits from the end of last Ice Age.

Favorable living conditions here have attracted people since prehistoric times. After all, this is the area with the highest density of stone tool finds in Slovenia, and graves in the form of earth mounds, both prehistoric and Roman. Relatively few settlements have been discovered in the area, which is due to the fact that the summits and the top ridges are, as in the past, intensively populated today. There are also some famous finds from the area of *Slovenian Hills*, among which stand out the dozens of helmets belonging to Iron Age warriors. Helmets were found in year 1811 on the hill, named *Ženjak*, situated south above old village *Benedikt* (*St. Benedict*). So-called Helmets from *Negova* (village few kilometers northeast from *St. Benedict*) represent the first such finds in general, so helmets aroused great interest among European scholars of prehistory in the first half of 19th century. Prehistory exploration was, of course, still in its infancy as a branch of science. In old village *St. Benedict*, exactly in the basement of the old parish church of *St. Benedict*, whose predecessor was built in the middle of the 9th century, a stone slab with engravings of three sun crosses and supposedly a human was found few years ago. The original location of this plate is unknown. This undoubtedly prehistoric example of Slovenian rock art is so far the only one, found in the area of *Central Slovenian Hills*. As it was found in an area with impressive archaeological heritage, we chose to some extent similar areas for field research in year 2021.

Slovenian Hills Field-Work 2021



We spent 3 days of field research in the area of a prehistoric complex, situated in *Western Slovenian Hills* (*Plački vrh* and *Brloga*), and 2 additional days in *Central Slovenian Hill* (valley of *Drvanja Stream*, village *Jakobski dol* and its surroundings).

ZAHODNE SLOVENSKE GORICE

Western Slovenian Hills

In the area, we investigated the most dominant and highest ridge above the river *Mura*. The ridge continues beyond the Austrian side of the border, all the way to the village of *Lučane* in the valley of *Solba* ('*Sulm*') river, which ends the cross-border area of *Slovenian Hills*. The geological base of the ridge, also an area of prehistoric complex, is around two kilometers long and mostly made of shell limestone and sandstone. At the eastern (*Brloga Summit*) and western ends (*Plač Summit*) of the ridge, we discovered settlement remains in year 2005. In the following years, we introduced these sites to the competent institutions (**ZYKD Maribor...**) and individuals (**Stanko Gojkovič, Andrej Magdič, Mira Strmčnik-Gulič**). Based on the surface finds (mostly fragments of ceramic, stone tools...) and archeological research after 2010, the preliminary age of this multi-period archaeological site was estimated at 6,000 years. This is an official assessment and extremely important, as it represents context for some unknown remnant, both in archeologically protected areas and in the immediate neighborhood.



HILL IN THE SHAPE OF AN EMBRYO - The hill, which is unnamed on the maps, reaches the height of about 410 m. Its name was also forgotten by the locals. There are at least three quarries on the hill which have not been used for a long time. The relief photograph of the area shows the entire hill, which is about 500 m long and about 300 m wide. It is obvious from the photograph that the hill has been largely transformed. At first glance, it is most reminiscent of a human embryo. We doubt that this happened only because of the exploitation of the stone.

In year 2021, the whole picture of this area was significantly complemented by a few

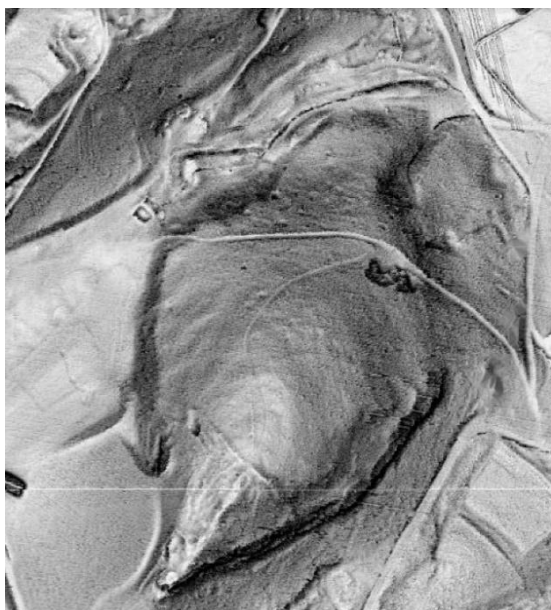
examples of rock art that we discovered and which are probably prehistoric. It is worth noting another special feature of the area, before we start presenting examples of rock-art. Namely, a large part of the area was once artificially transformed in the past. LIDAR images show some surprising characteristics of the ridge, especially in the eastern part, which cannot be of natural origin, because of the exact geometric shapes - circles and regular triangles - in the photos of ridge relief (LIDAR).

Examples of rock art were identified at three places on the ridge. The first place is located on the extreme eastern edge of the settlement.



BRLOGA SUMMIT – At the top there are 15 larger and smaller sandstone monoliths that stand forming a polygon - an alleged megalithic monument. At its top is a chapel. The eastern part of the formation is densely overgrown with bushes, so we have not been able to check this part of the formation accurately. Preliminary measurements have shown that those sides of the stone polygon whose orientations could be measured have a significant astronomical record (solstice, equinox, phases of the 18.6-year lunar cycle). There is an empty space between the monoliths, between 10 and 30 cm. In the outer areas of the polygon, the eastern part of which is warped inside the stone formation, smugglers allegedly hid goods decades ago. Inside the formation there are fox dens today.

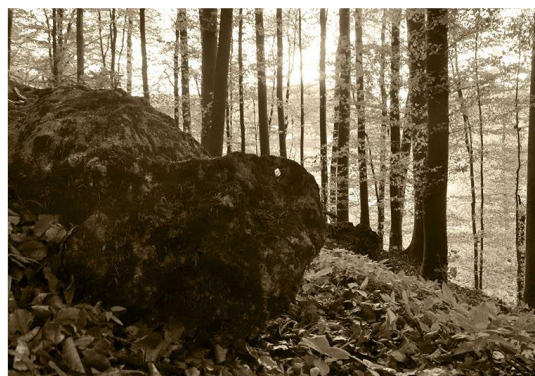
Access to it is protected by sandstone cliffs, that stretch all the way from the foothills to the top of *Brloga* (*Brloga Summit*, 428 m). The initial impression is that the top of the cliff is subject to greater erosion than the lower lying parts. So, we have listed 15 larger and smaller blocks of sandstone standing next to each other, with notches between them. If we look at the group of stones from a bird perspective, the shape could be a hexagon or even an octagon. An accurate estimate could not be given because we were at the site in late spring, so the east side of the formation was hidden in lush vegetation.



BRLOGA HILL – Today most of the hill is protected as an archaeological site. The supposed megalithic structure or the top of Brloga Hill is located at the end of the triangular part of the hill (bottom left). The line going from the top down the middle is the remnant of the defensive embankment, and the sides of the triangle represent the turning points where the slope begins. The side of the triangle on the right (colored black) actually represents the precipice cliffs that protect access to the settlement above the important path between the Graz Basin and the Drava-Ptuj Field. The foundation of the triangle is also an earthen embankment, which, however, continues in the direction of the NW all the way to the saddle below. Most of the surface archeological finds (dominated by the Late Bronze Age, some ancient pieces of pottery, also a fragment of a stone ax - blade) are from the area outside the triangle (the area in the middle of the photo).

Preliminary measurements have shown, that at least 5 sides of the polygon have significant astronomical orientations, and that they differ in length. At the top of the platform from sandstone block, from where we have an exceptional view of the southern horizon, is a chapel. On the north-west side of the rock formation there is a terrace, whose inner edge is bounded by a drywall (maximum height half meter). A few meters further north there is an embankment filled with small parts of shell limestone, measuring about a meter in height and a maximum of 2 meters in width. The length of the embankment is about 80 m and it ends with the next embankment (about 85 m in length), which is placed approximately perpendicular to it. Experts assume, that behind this embankment and on the northern slope of the hill there was a settlement from the Late Bronze Age as showed by numerous fragments of pottery and stone tools, which we found in the area. We

also found a well-preserved quartz blade in the framework of field research in 2021.



QUARTZ KNIFE - found in the area of a multi-period site on Brloga Hill (below) and a monolith with a hole of a few centimeters at the top, located north below the embryo-shaped hill.

Among the surface finds, which we handed over to the representatives of Slovenian monument protection institution, there were in addition to typical artifacts from the Late Bronze Age also fragments of medieval pottery. By oral tradition and historic sources, in *Brloga Summit* there was also a gathering place of a Christian heretical sect of the so called 'Skakači' ('Jumpers'). Caves are supposed to be under the stones of *Brloga Summit*, as ideal hiding places for smuggled goods. Lower down in the cliff, we saw a cave where a few decades ago some kind of village weirdo lived. Otherwise, Slovenian word 'brlog' mean in English 'den'. Because the name 'Brloga' is plural, the name of the hill in English reads 'Dens Hill'.

Our opinion is, that the extent of the prehistoric settlement has not been precisely determined since 2009, when the area was included in the register of cultural heritage of Slovenia. On the neighboring summit to the west

and already outside the protected area there are many traces. We have not been able to find the name of this summit, which has in the aerial images of the relief (LIDAR) of the area a shape most reminiscent of a human embryo. A part of it is separated from the remains on the *Brloga Hill* by a flat saddle. Just below the saddle there is a spring with a dry-stone well. Due to close proximity, we conclude that the remains on both sides of the saddle should be interpreted in the context of officially confirmed multi-period settlement on *Brloga Hill*.

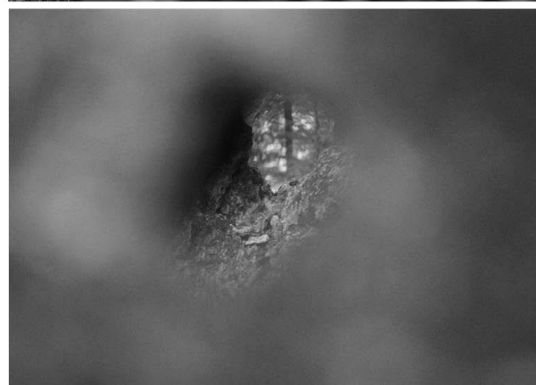
It is obvious from the LIDAR image of this 'nameless' hill, that its natural appearance has been fundamentally changed by human hand in an unknown period of the past. Among other things, there is a platform made of earth at the northern foot of the hill. The aerial relief photography reveals, that it is in the shape of an isosceles triangle, the apex of which is directing exactly towards the North Pole. The legs of the triangular platform, which are longer, measure about 140 m, and base 70 m in length.



An isosceles triangle-shaped ground platform NW below the embryo-shaped hill. At the conclusions of the shorter foundation page there are two mound-like formations. At about a third of its height, a ditch is dug into the triangular platform - a former access to the platform in the NE direction between the extreme northern position of the moon (Mayor Lunar Standstill) and the summer solstice point sunrise. In the part of the triangular platform above the path (above) there is an area

with at least 34 monoliths, which are limited exclusively to this area.

In the upper half of the triangle there is concentration of at least 34 stones from shell limestone, for which measurements have shown, that they are placed on a similar matrix as those in the locations on *Pohorje Mountain* and *Kozjak Mountain*. Here we also found a stone pierced at the top with a small hole. Through it we can see a section of adjacent stone a few meters away, whose upper part is most reminiscent of horns. Specifically, our gaze is focused precisely on the gap between the 'horns', which defines particular point on horizon.



A horn-shaped monolith (in the background) and a monolith with a hole (pictured with a stone knife from *Brloga Summit*), which directs our gaze between the horns and further to the horizon to the point where the sun rises at the summer solstice.

Measurements have shown exactly the point, where the sun rises on June 21 (summer solstice). As already mentioned, we have discovered similar stone horns in the vicinity of village *Holy Spirit on Shrap Summit (Ostri vrh)* in *Kozjak Mountain*, but very much larger than the stones in question. However, in both cases there are horns – exactly at the junction point - directed toward important turning point of the annual solar cycle in the horizon.



HORN-SHAPED MONOLITH - in the background (under the sun, half the height and a little to the left) a monolith with a hole.

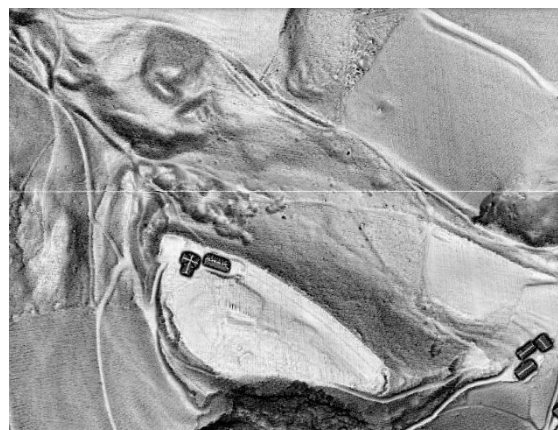
The following is also interesting. Three summits with stone formations around village *Holy Spirit* in *Kozjak Mountain* are well visible from the entire ridge between *Brloga Hill* and *Plački vrh* (*Plač Summit*). From the top of *Brloga Hill* there is clearly visible the western hill with the *Church of the Holy Spirit* at the top of the *Ostri vrh* (*Sharp Summit*). The northern slope of *Ostri vrh* from this point of view marks the point where the sun sets at the winter solstice.



Sunset at the equinox from the top of BRLOGA SUMMIT.

Further west, the main ridge rising steeply for the third time, towards the top of *Kresnica Summit* (444 m). It covers approx. 6 ha area, which is surrounded on all sides by slopes. From the east and west, the terrain of the summit elevates, and in the middle slopes slightly. Ditches, leveling and other interventions in the terrain are visible in the forest, and an old quarry of shell limestone descends the slope on the west side. Our opinion is, that the summit was intensively populated and part of a prehistoric settlement complex, that encompassed the entire ridge between *Brloga Summit* and *Plač Summit*, and not just two separate

settlements as interpreted by archaeologists.



HILLFORT PLAČKI VRH is located at the end of the ridge which begins with the *Brloga Summit* at east. The top of the hill was probably leveled in prehistoric times. Archaeological finds show that the area was continuously inhabited during the Cooper Age, through all the periods of the Bronze and Iron Age and during the Roman period. To the west and below the summit there is a saddle crossed by the main Roman road leading north to the Roman city *Flavia Solva* in the *Graz Basin*, and to the south towards the Roman cities *Celea* in the *Celje Basin* and *Poetovio* in the *Drava-Ptuj plain*. In the Middle Ages, there was a toll station below the summit, and according to many sources, important as well.

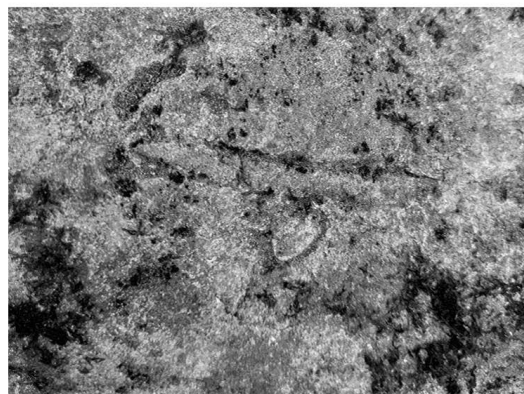
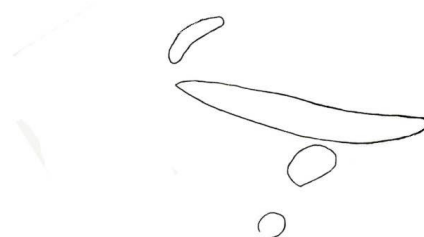
At the extreme west of the ridge, named *Plački vrh* (*Plač Summit*) or *Sonnenberg* (*Sunny Summit*, 511 m) and also its highest point, there is the second archaeological site. According to finds, settlement in *Plač Summit* chronologically exceeds the settlement at the *Brloga Hill*. Surface finds on *Plač Summit*, which we handed over to representatives of the Public Institute for the Protection of Cultural Heritage - Maribor Unit (**ZVKDS – Maribor**), and subsequent excavations by Institute of Preventive Archeology Slovenia (**Inštitut za preventivno arheologijo Slovenija**) showed a picture of a multi-period site. The oldest settlement finds are from the Cooper Age, from the 4th millennium BC. The settlement existed throughout the Bronze and Iron Ages, and probably also in the Roman period. Then the western foot of *Plač Summit* was crossed by the main road in the direction of the *Municipium Flavia Solva* (today city of *Leibnitz*), which in the opposite direction (south) led to the *Municipium Claudia Celeia* (city of *Celje*) and the *Colonia Ulpia Traiana Poetovo* (city of *Ptuj*). This road has been preserved throughout the Middle Ages, when there was a station where the carriers had to pay customs duties for the transported goods.

There is an exceptional panorama from *Plač Summit*. Access to the plain of the summit is protected by slopes, and from the south by cliffs, in which there is an entrance to the karst cave.



TRIANGULAR-SHAPED STONE SLAB was originally most likely placed vertically, but has tilted over time. It is located a few tens of meters away from larger earth structures, which experts interpret as large burial mounds from the Middle Bronze Age. Petroglyphs are visible on the upper surface of the stone slab.

In the north direction below the multi-period settlement there is an area with earthen structures, which archaeologists interpret as funeral mounds. In reality, they don't know, what is actually hidden in them, because, they were not excavated. In the immediate vicinity of the presumed funeral mounds, an upright stone is placed. Its relation to the largest of the mounds bears significant astronomical meaning. And secondly, on this upright stone, traces of engravings were discovered in the year 2021. Some parts of its surface are overgrown with moss, so it is possible that there is another engraving. The stone was not cleaned. This last is in the plan for the second phase of our project, when we intend to record all examples of stone art in Slovenia in accordance with valid standards for recording rock art.



PETROGLYPH PLAČKI VRH on the upper surface of a triangular-shaped stone slab.

CENTRALNE SLOVENSKE GORICE

Central Slovenian Hills

We did additional 2 days of research in the area of *Central Slovenian Hills*. First day of research took place in the wider area of the village *Jakobski dol*. There are no official archeological sites in *Jakobski dol* and in the surrounding area. The nearest, mound necropolis of natives from the Roman period, is located south-east in the neighboring valley, in front of the village of *Sveti Jurij (St. George)*. Otherwise, *Jakobski dol* is an area with some individual finds that testify about the presence of cultures in late Neolithic and Cooper Age(copper dagger). When the old parish church of *St. Jacob* was built, a Roman white marble tombstone with a relief of a married couple above the inscription field was used as handy building material.



JAKOBSKI DOL - ROMAN TOMBSTONE with a relief of the deceased and an inscription plate made of white marble from Pohorje Mountain. Today it is built into the wall of the church of St. Jacob.

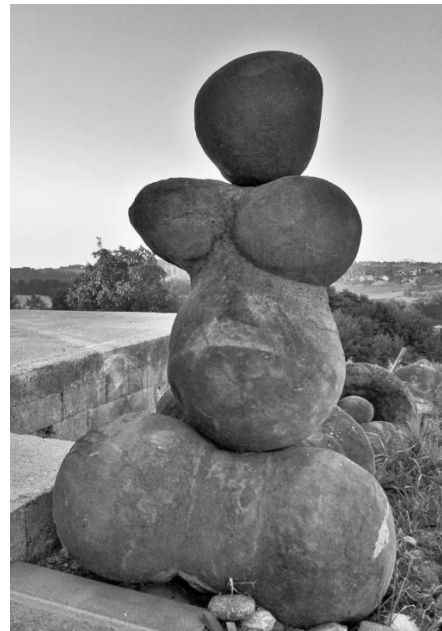
The main motive for our visit in area was old information about unusual rock formations in shapes of spheres that were originally located underground. In *Zgornje Hlapje* area northward, sandstone 'spheres' were presented to us on the estate of a local winegrower. They were excavated during the landscaping of the vineyard. Among the

excavated stones are two complete spheres with a diameter of 30 and 40 cm.



Sandstone stone spheres used in the construction of the scarp. The highest stone has the shape of a perfect sphere.

According to the owner, a similar exact sphere, but much larger (estimated to be at least 1 m in diameter), once stood higher on the estate and was later destroyed. Otherwise, sandstones of more irregular shapes with rounded edges dominate. The same can be said for the stones excavated by the owner of the estate in *Jakobski dol*. These are stone spheres of smaller dimensions (up to 10 cm in diameter), which are not as perfect as the already mentioned spheres from *Zgornje Hlapje*.



The locals made an interesting sculpture out of three stones. According to him, there used to be a large and perfectly regular sandstone ball on the estate, which he estimated was a good meter in diameter. They smashed it while building electrical wiring.

Despite two perfect spheres and two other pieces of exceptional shapes in *Zgornje Hlapje*, and smaller stone spheres from village *Jakobski dol*, we assume, that they are most likely natural formations. Finally, we didn't notice any engravings on them. In any case, these interesting sandstones will need to be checked in more detail.



The so-called Attila Castle is a large mound of earth surrounded by a moat with an embankment. At the top of the mound, a wooden tower of a less important nobleman is said to have stood in the 12th century or earlier. Pottery from the 7th century was also found during the excavation of the mound. But it is younger than the period of the Hun invasions, so the legend of Attila's castle, the leader of the Huns, thus has no archaeological basis. Similar in shape, but of much larger dimensions, is the earth structure in the valley of the Drvanja Stream, which is located a few kilometers south and we have not been able to photograph it so far.

The second day of field research was completed in the valley of the *Drvanja Stream*. There are at least ten archeological sites and an area with quarries of shell limestone in use since Roman times. Within the frame of the field research, we focused on the area with quarries and the terrain above, because here there is a large mound necropolis from the Roman period, which is associated with quarries below by archeologists. We did not find any examples of stone art in the mentioned locations.

The second site, which we explored that day, is located near the end of the valley south-east from necropolis. We were reminded of it by our collaborator **mag. Iztok Erjavec**, who also lives nearby. It turned out, that at the foot of the hills on the eastern side of the valley, a massive earth structure is situated. Earth structure is about 20 m in height above the ground level of the valley, and about 100 m in diameter. On the east side, where the structure meets the footing of *Drvanja Valley*, the difference in height between foothill and its top

is slightly lower, but still about 10 m. The structure is in some places made of earth, in others of smaller pebbles, among which quartz predominates. At the top of the structure there are at least three leveled areas that also include some deepened terrain. On the west side, where the structure faces the valley, there is a spacious terrace about 10 m below the top terraces. On the opposite side, a deep ditch was dug in the middle of the structure layout. The ditch represents the easiest access to the terraces at the top of structure

There are also a few ditch-shaped depressions at the edges of the top of the structure. Preliminary measurements have shown significant astronomical orientations. One of the ditches on the north-west side is directed toward 306 degrees, so exactly to the point where the sun sets at the summer solstice. In this case, it is the summit, on which the famous pilgrimage church of the Holy Trinity was built. It can be argued with high probability, that these elements of the earth's structure are the work of human hands. After all, there is a certain degree of probability, that the whole structure was artificially made at an unknown time in the past and with an unknown purpose.

In the town of *Lenart*, today's center of *Central Slovenian Hills*, we found four sculptured stones from sandstone and limestone, situated about fifty meters NW from the parish church of *St. Lenart (Leonard)*. Origins of these stones are unknown.



The upright sandstone reminiscent of a wine bottle in the lower, roughly shaped part, has a human head shaped at the top. There is also the only record of this stone, according to which it is a sculpture from the 16th century. The way the head is shaped encourages this placement. The head was once said to have a crown, but it was removed and replaced with an infamous concrete fill. The second stone has a spiral instead of a head. The third and fourth stones are made of shell limestone - a stone sofa and a corner stone.

BOČKO-MACELJSKO HRIBOVJE

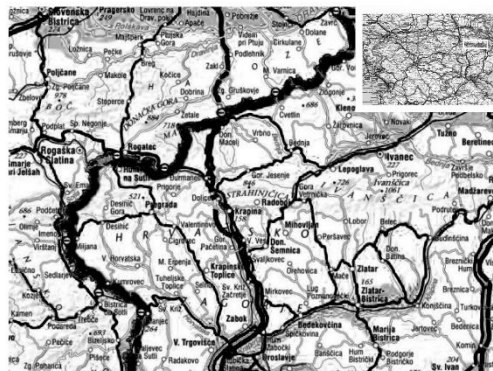
(Boč-Macelj Highland)

The *Boč-Macelj Highlands* represent the final south-eastern ridge of *Eastern Alps*, consisting mostly of resistant limestone. This natural barrier between the *Drava-Ptuj Field* and the *Celje Basin* is also the watershed between the two largest Slovenian rivers, the *Drava* on the north and the *Sava* on its south side. Among the peaks *Donačka gora* (*Donačka Mountain*) and *Boč* (*Boč Mountain*) stand out the most in the image of the landscape. *Boč Mountain* is also the highest peak of the ridge. The plains on the north and south sides of this natural barrier are connected by narrow passages, along which the ruins of some medieval castle are still situated. Here there are also older archeological sites, mostly on the south side of the highland. Today it is a sparsely populated area dotted with secluded farms, far away from major roads, with extensive forest areas and on few places predominantly transitional. Here there is no great difference between today and the Middle Ages, as there are only three smaller and relatively insignificant churches in the area, moreover, they are in secluded places. But the more we dive into the past, the more archeological sites multiply.

After all, this is also the area where we conducted our initiation in field research. In 2005, we assembled a mosaic of an extensive prehistoric settlement on the extreme slopes (40 degrees and more) of *Donačka Mountain*. We were led to the discovery by a century old historical source, which states the existence of a hillfort high in the mountain and some archaeological finds (belt buckles, arrows, slag ...). Before us, no one took this valuable source as a credible. In September 2016, smaller archeological excavations were organized and carried out on the site by our associate **Dr. Boštjan Odar**.

Previous and new finds showing a multi-period picture of the site and, as it appears, with continuous settlement in the range between the Late Bronze Age and the Middle Ages (12th century).

Boč-Macelj Highland field research 2021



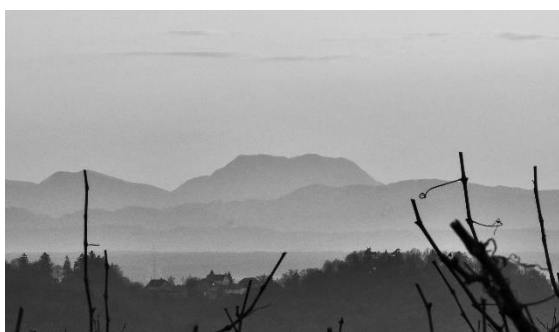
Field research in the area was conducted within 7 days. In addition to some already mentioned sites with remains of past, we also inspected some new areas at the top of the ridge.

We spent 4 days in the area of *Donačka Mountain* and next two days on *Boč Mountain*. Last day of field research, we walked the area of the entire ridge from *Macelj Mountain* to village *Spodnje Poljčane* below *Boč Mountain*.

DONAČKA GORA

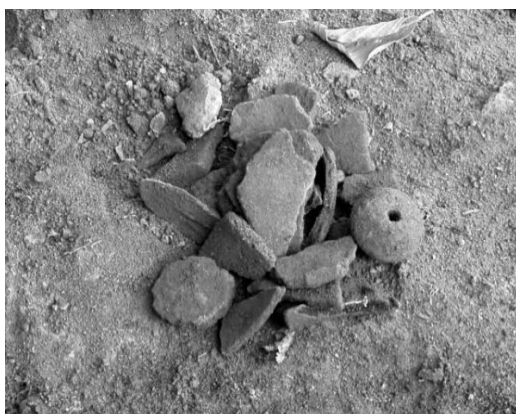
Donačka Mountain

Here field research was mostly conducted in the area under the south cliffs of *Donačka Mountain*, on the surface of about 30 ha. The cliffs protect the access to the already mentioned hillfort, which we discovered in 2005.



DONAČKA MOUNTAIN - The view from Slovenian Hills shows us a mountain with three peaks.

Based on old reports and surface finds of prehistoric and Roman ceramics, the terrain under the south cliffs, which was the subject of research in 2021, is also partially protected. These reports highlighted one particular place, namely strong water spring, around which Roman coins and some prehistoric objects were found. Based mostly on these reports, the eminent Slovene archaeologist **dr. Slavko Ciglenečki** assumed there was a late Roman-era settlement here. But he also claimed, that he discovered settlement layers 100 m in length in the profile of the new cart track, where he also found some pieces of late antique pottery.



Surface finds of ceramics discovered during an inspection in 2007 (Dr. Boštjan Odar, Dr. Benjamin Štular and Matej Dasko, M.Sc.) above the precipices and in the area of the legendary settlement 'Dvor', which at that time was not yet archaeologically attested.

But he has documented none of these discoveries. So there is neither a sketch of the layer nor a photograph of it, nor a photograph of the pottery site in situ, and finally, no drawing of fragments of pottery. Thus, in this interpretation we can only unconditionally trust the words of renowned Slovenian archaeologist for late antiquity. It is also true, that here there is a strong spring, but settlement is not archaeologically attested. Unlike the site above the cliffs where we excavated in 2016.

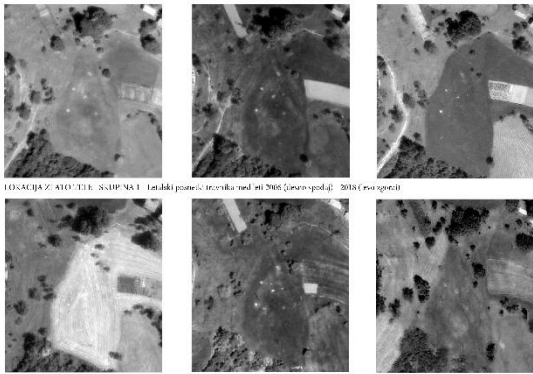


Archaeologically unexplored ruins in the western slopes of the *Donačka Mountain*. The photo shows a dry wall that reaches a height of about 12 m. Above it, there is a terrace with ruins with a similar, slightly lower wall. At the top, there is a space of rectangular ground plan, partly cut into the rock.

In the end of the year 2018, we started researching this area more thoroughly in winter months, when the terrain is more transparent. So we came across a huge solitary rock about 7 meters in height that could be modelled. At the end of year 2019 and the beginning of 2020, we were documenting the folk tradition associated with the *Donačka Mountain*. So, we visited about 10 elderly locals, who live or had lived at the foot of *Donačka Mountain* and in the vicinity. So we get some new information, among other things stories concerning the already known locations at the mountain, and also about some places in the lower parts of the mountain yet unknown to us. Among them there is also a meadow, where, according to the locals, a 'golden calf' was buried.

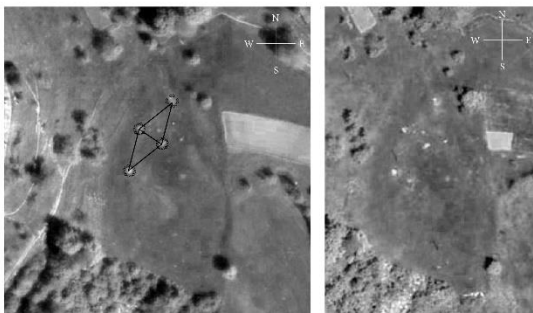
On the first day of the field research in *Donačka Mountain*, we did some measurements precisely on this meadow. The meadow is situated in a ravine between two ridges, and beneath it there is a spring. When we first visited this meadow during our first trip in February 2020, our

attention was drawn to the gray spots on its surface. They are the upper surfaces of stones, most of which are buried underground. Three of the stones, measuring about two meters in length and about 1 meter in width and height, were excavated by the owner **Anton Bukšek** some years ago and then pulled out with tractor to the edge of the meadow.



'GOLDEN CALF' MEADOW - Aerial shots of the meadow were taken between 2008 and 2018. The photos clearly show four stones arranged in the shape of a rhombus, the position of which did not change during this time.

In the face of all efforts, he finally gave up and reconciled ourselves with the gray spots in his meadow. Based on this 'excavation', we conclude that the stones just below the surface probably have similar dimensions. Upper surfaces of the stones have a varied relief, which, however, seems completely natural.

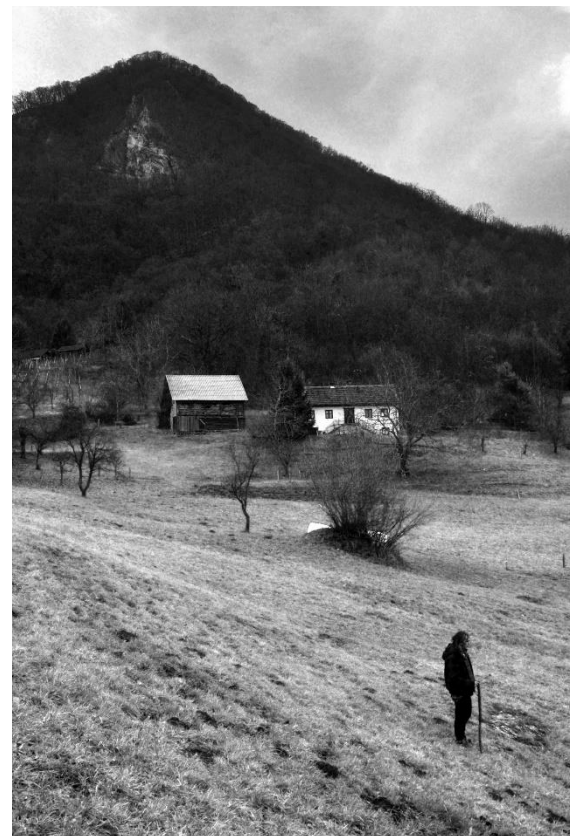


'GOLDEN CALF' MEADOW - The length of the sides of the rhombus and the length of the shorter diagonal are in the ratio of the golden ratio.

Later, we photographed the meadow from the top of the ridge. So we got the impression that the stones are arranged in precise relations. A rhombus with four stones in edges was clearly seen in the photo. Subsequent field research in year 2020 was prevented by an outbreak of the Covid19 epidemic. Visual

impression, that four stones are arranged in the relation of rhombus, was later confirmed by an aerial photographs of the meadow, which we obtained from public records. A closer analysis of relations between the 11 points - 9 stones and 2 mounds from broken stone, which in shape resemble grave mounds and for which measurements have shown that they could be part of the formation - confirmed our impression.

More accurate measurements of this formation were made in 2021. The 'in situ' situation showed virtually no deviations from the results of the aerial photographs analysis. At the same time, we took a closer look at the terrain, and found at least 9 new stones, which were not visible in the aerial photographs, as they were mostly below the surface. This fact shows, that the whole picture of formation is more complex, as we have thought so far. We only measured the distance between the edges of stones, because most of them are located underground, so we don't have an idea about their actual dimensions.



'GOLDEN CALF' MEADOW – In the photo NW stone (next to the figure, right) of rhombus, in the background is the western peak of Donačka Mountain.

Nevertheless, we can confirm with great certainty, that the four stones on the meadow are arranged in such a manner, that each represents one of the four foci of the rhombus. The side of the rhombus is a good 16 m long, with a longer diagonal of just under 31 m, and a shorter diagonal approximately 10 m. The shorter diagonals of the rhombus and the side of the rhombus are in relation of the golden ratio. The longer diagonal measures about 30.8 m in length and is aligned toward 36 degrees northeast and 206 degrees southwest, as preliminary measurements showed. The shorter diagonal, which is perpendicular to the longer diagonal, therefore has an orientation of 126 degrees southeast and 306 southwest. These are the points, where the sun rises at the winter solstice and sets at the summer solstice.

Although the rhombus is the most prominent figure on the meadow, there are 5 more stones in its immediate vicinity, which at first glance break the symmetry.



Boundary stone between three estates measuring in height 1 megalithic yard (left). We found another stone of identical height in Donačka Mountain, also placed upright. To the right of the photo there are the remains of an old road paved with stone slabs, which according to the locals is 'Roman'.

Measurements of the distances between the remaining stones, including nine which we identified that day, showed the relations of isosceles and equilateral triangles. This part of the measurements was not in the plan. In the field, we encountered a more complex situation than we had expected. That means, that we'll have a lot of work to do at this location.

Surface finds of pottery fragments a few meters east of the meadow, exactly in the smaller field, also indicate that research was justified. As the field was plowed in the spring of 2021, it is

exclusively a find in the plow layer (max. 30 cm deep). It contained at least 20 fragments of pottery including also two prehistoric pieces.



Fragments of pottery found during a visit in 2021 in a small field in the NE near the meadow with monoliths.

Higher above the meadow there is an embankment, also made of broken stone and about 15 meters long. A few meters to the west is an upright stone, which delimits three plots. According to **Anton Bukšek**, this stone has been there 'since time immemorial'. This is the only upright stone we found in the wider area of the meadow. There is no engraving on its surface, but it has another special feature. It measures just under 83 cm from the base to the top. This is the same length as yet mentioned *Megalithic Yard*, the basic unit of measurement, which presumably was used on the *British Isles* and the *West Atlantic Coast* through Neolithic period, as **dr. Alexander Thom** claimed.



The monolith in the photo was partially excavated during field research. There was only a small part of the stone on the surface, no more than 20 cm long and 10 cm wide. A partial excavation showed that under a few centimeters thick layer of earth is monolith about 2 m long and about 80 cm wide. The impression is that the top of the stone is shaped, and that in the original position it stood upright.

The height of the milestone above the meadow is also identical to that of the upright

stone which we found less than a kilometer to the east, still in *Donačka Mountain*. It is also in the area where we completed the second day of our field research.



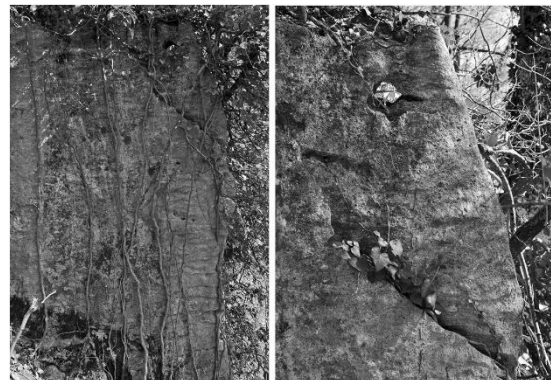
FIVE-SIDED MONOLITH - Monolith with five flat sides containing astronomical records. It was originally 3 m higher (10 m). Its top lies broken below it. To the right, a dry wall rests on the monolith, continuing to its left (not visible in the photo).

The second stone with identical height 83 cm is located approx. 30 m away from yet mentioned solitary rock, about 7 m in height and with five distinctive sides. In fact, this is a five-sided monolith. If we look from the upright stone towards the direction of the five-sided monolith, its top marks the point on the horizon, where the sun rises at winter solstice. In the opposite direction, a smaller stone marks the point on the horizon, where the sun sets on the day of summer solstice. The five-sided monolith has five distinct sides that converge towards the top. Unfortunately, the top of rock is not visible, because it is overgrown with evergreen ivy.



The southern edge of the side facing NW has a few centimeters wide notches in height, which more or less weigh horizontally along the wall by a maximum of a few tens of centimeters. The notches intersect in several places, their thickness and depth varying.

Our archaeologist described the unusually correct shape of the rock as a 'quarry', from which the drystone terraces situated in the vicinity, which prevent landslides, were made. Whereas we don't doubt, that five-sided monolith has traces of processing, however, our team doesn't have a single opinion about its purpose. The thesis, that its shape is exclusively due to the breaking of the stone, is erroneous in the light of some of the facts, shown by our measurements. Why is the first side parallel to the third side, and the second side with the fourth? And further, why are both sides oriented exactly in the east-west direction (90-270 degrees)? That this was not a quarry, is also shown by the second and fourth sides, parallel to the direction of 155-335 degrees. Last but not least, the side five is exactly in alignment with the north-south direction (0-180 degrees). And that is not all. On the side two, on the south edge, horizontal lines were engraved. The lines are about 2 cm wide and 1 cm deep and are parallel to the ground level and line up vertically towards the top of the rock.



The southern edge of the side facing NW (left). To the right there is its top in the shape of an animal's head whose 'eye' (carved opening) is directed exactly to the point on the horizon where the sun rises at the equinox - Veliki Belinovec Summit on Macelj Mountain.

Above them there is a hole, through which we could see the horizon. Most likely, the hole is the work of human hands. Its orientation to the point where the sun rises at the equinox (90 degrees), including the features already mentioned indicates probability that it is a cult rock.

Additional evidence for this claim is on the edge separating side two and side three. There are carved stairs, which allow one to climb to the top of the rock. On the side three there are a few centimeters wide and deep depressions of irregular

circular shapes with the highest concentration around the already mentioned northwestern edge. Towards the top of the side four there is a crack, which widens with height and flows into a deepening at the top, which - as already mentioned - is not clearly visible. Side five runs up to a height of approximately 1,5 of meter, perpendicular (vertical) to the ground level. It breaks inwards from this point towards the top. On the side one, which has not yet been mentioned and is completely perpendicular to the ground level, there is an unusual bulge near the top of the rock, albeit poorly visible. Despite the fact that top of the solitary rock is in lush vegetation, it is visible to some extent. The top isn't flat, but a fragmented area with depressions and peaks.



A monolith measuring 1 megalithic yard (nr.2 on Donačka Mountain) in height and located about 30 m NE of the four-sided monolith. Its foundation was most likely made of smaller stone slabs stacked in the shape of a regular hexagon. Four sides of the latter have been preserved.

In the vicinity of the five-sided monolith, there is another rock formation and structures from stone, also worth a brief description. Our impression is, that the drywall layouts around five-sided monolith are adapted to it. Another interesting fact is, that there is an old path leading exactly to five-sided monolith. Its side two continues on both sides with a dry wall, which joins the already mentioned path on the south side.

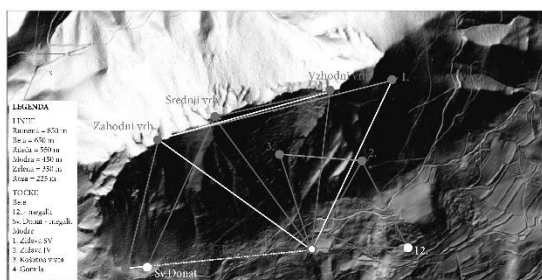
Next to the side two, there is a larger leveling, and above it the next drywall. Next leveling is roughly 2 meters lower and next to the side three, surrounded by a dry wall on the other edge. In the middle of it, there is a plate with a barely perceptible deep relief in the shape which is difficult to decipher. We could say it most resembles a human palm.

Exactly south (180 degrees) of the five-sided monolith is a puzzle from six stones, at about the same distance (i.e. about 30 m) as the upright stone (with same height – 1 Megalithic Yard, approx. 83 cm - as milestone on 'Golden calf meadow'), which from the point of view of a solitary rock marks the point of the summer solstice sunrise.



The formation consisting of six monoliths is located exactly south of the five-sided monolith and at approximately the same distance as the vertical stone of the NE.

The possibility that the five-sided solitary rock is to some extent the work of human hands could also be indicated by its position and relations to the main natural and cultural points of the surroundings. We found relevant answers on special maps and relief photography (LIDAR) of the area. The five-sided monolith is located at the same distance (approximately 550 m) from two of the three distinct summits of *Donačka Mountain*. Specifically, the five-sided monolith is in the ratio of an isosceles triangle to the two highest points on the main ridge of *Donačka Mountain*, the *Middle Summit* and *Eastern Summit*.



The five-sided monolith could be interpreted as a geodetic point due to the relations it has with neighboring points of cultural significance (peak, entrance to a prehistoric settlement, fortress, main mountain peaks ...)

Today, on *Middle Summit* (884 m altitude) there is a few meters high masonry cross, which replaced the old cross, destroyed after World War II. Old cross still lies below the summit, mixed with the ruins of a former mountain shelter from the late 19th century. As part of defense of *Styria Province* against Turkish invasions, a signal station was set up on *Middle Summit* in the 16th century. In face of impending threats, a bonfire, which was visible after almost the whole of *Lower Styria*, was lit.

In older historical debates, it is claimed, that on the *Middle Summit* of *Donačka Mountain* there stands an older church of *St. Donatus* (Sv. Donat), later destroyed in a storm. In late Roman period, here there stood, presumably, the temple of the god *Mithras*, and in prehistory a shrine of an unknown *Celtic* deity. It should be pointed out, that there is very little space on the *Middle Summit* (about 200 square meters of flat surface). And secondly, none of the three mentioned sanctuaries has been proven archaeologically.



Panoramic view from Eastern Summit - Zahodne Haloze (West Haloze Hills, below), behind the Haloze Hills the plain of the Drava-Ptuj Field, and in the background Pohorje Mountain and on the far right Kozjak Mountain. Both the Amber Route and the later main Roman road once ran along the plain. This area of the mountain is part of a legendary prehistoric site, which

testifies to its strategic location in the area of Lower Styria. This area of the mountain is part of a legendary prehistoric site 'Dvor', and testifies about its strategic location in the area of Lower Styria.

Middle Summit consist of compact rock. But the rock at *Eastern Summit* is quite different, though distance between the summits is less than 500 m. *Eastern Summit* of the mountain is some kind of a jigsaw puzzle from boulders. History is silent about this summit with an exceptional view to the east.

The rocky ridge between the *Middle Summit* and *Eastern Summit*, which is a precipice on the northern side, represents the upper edge of the already mentioned prehistoric hillfort, which we discovered in 2005. It is also the base of the isosceles triangle between the two summits and the five-sided monolith. And the fact is, that practically the entire area of the multi - period archeological site above the precipices is inside this isosceles triangle outcrop.

The same distance we find between the five-sided monolith and both of the summits is there also toward a spatial terrace, where the new church of *St. Donatus* was built after a catastrophe in 1742 when the old church was totally destroyed by lightning strike with 59 pilgrims dying. A few meters north from the church is a boulder, good two meters long and wide around half meter wideness, whose length is aligned with the Polar Axis. By including this stone as a new point, we get an equilateral triangle with five-sided rock and *Middle Summit* of *Donačka Mountain*.

The possibility, that these measurable facts aren't coincidental, is supported by some other facts. Access to the multi-period settlement, surrounded by precipices, was only possible in three places. They are so-called 'Big Gate', 'Small Gate' and 'Deer Gate' (*Velika Vrata*, *Mala Vrata*, *Košutna vrata*) which have been carved into living rock, presumably in prehistoric times. Three paths led to the three gates toward the settlement. Below, where three paths reach a very steep slope, they are without exception surrounded by more complex drywall constructions, which in one case reach a height of about 15 m. Our assumption is, that these are defense structures, that have been watching over these entrances into the hillfort

above the precipices. We highlight all these additional points because they are also in the correct geometric proportions with the five-sided monolith.

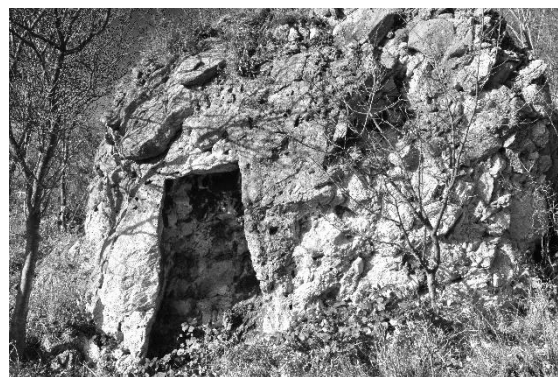
The third day of the field research was dedicated to the terrain which is located east of the five-sided solitary rock, and the area along the old cart track that leads to the main road in the valley and is supposed to run along the route of a former Roman road. Most of this area is no longer archaeologically protected, although there are many abandoned terraces and dry stone walls that are also visible.

There is also a large rock with a carved niche. This intervention on rock turned out to be at most 40 years old. According to the landowner, it was made by a shepherd who served at their house. This shepherd said about his unusual 'project', that he would make a chapel from rock and place a statue of Virgin Mary in a niche.



A dry wall between 2 and 3 m high and a good meter wide runs along the supposed Roman road (the road is paved with larger stone slabs) for around 170 m in length. Somewhere in the middle of its length, above the wall, there is a strong spring of water 'V grušovji'. Some Roman coins, a bronze fibula, a belt buckle, a copper dagger, etc. were found at this spring. The wall, road and spring are located in an archeological area of 15 ha, which is legally protected. The area of a multiperiod settlement, which we discovered in 2005, is higher up and represent additional 8 ha of the protected area.

But before he finished his work, he left the farm under mysterious circumstances and never returned.



ROCK WITH A CARVED NICHE on the southern slope of Donačka Mountain. The rock is different from all the stones considered so far. It is a conglomerate, possibly of volcanic origin, as the various stones in it (all of which, without exception, have sharp edges and larger dimensions) are strongly attached. It feels like it was melted at a high temperature.

It is interesting to note that the niche is oriented exactly to the south, which means that its interior is fully illuminated at the astronomical noon. The shepherd therefore carved into the wall, which runs exactly in the east-west direction and is perpendicular to the south. Was the shepherd aware of this fact? The relation of this rock with a niche to the five-sided rock a few hundred meters westward also indicates an astronomically significant relationship. The rocks are situated exactly in the line east-west (90-270 degrees), five-sided on the west and the rock with a niche on the east. This is also the direction we look through the hole on the five-sided stone. If the terrain had not been overgrown, we would probably have seen through the hole the rock with a niche, from this perspective situating on the horizon line. The summit of *Veliki Belinovec* representing exactly the point on horizon, where sun rise at time of both equinoxes.

The distance between the two rocks is about 350 m, which from both points also applies to the distance toward mighty dry stone structures that enclose one of the paths to the hillfort above. Which means that these three points are in the ratio of an equilateral triangle. Our opinion is that there are too many of these coincidences, which show just the opposite.

It should also be noted that the rock with a niche consists of a different rock than the five-sided one. To the east of the latter, an area with a different geological composition begins. It is a relatively small area (200 x 300 m) with a special rock, that we have not found anywhere else on the

Donačka Mountain. There are at least two kinds of stone in it. It also contains pieces of stone up to 20 cm in size (in one part even a log about a meter long) with sharp edges and clear sides connected by an unidentified mixture. In some places we had the impression, that in some conglomerate formations, smaller stones were somehow fused to some extent. Finally, it is also a type of conglomerate that we have not seen elsewhere in Slovenia so far.

In this area, which all tourist routes effectively avoid, and to our great surprise, we have listed at least 20 smaller and some larger stones from the conglomerate. We have been on the mountain at least 250 times since 2005, but always overlooked this special area with huge conglomerates. They are actually the largest on the mountain - both in terms of volume and height. Compared to the 12 m high upright rock and some others, the stone with the niche is really small. So, it is no exaggeration to say, that even for *Donačka Mountain* - which is in itself a fascinating natural landmark - the area with the large conglomerates is a real specialty of the mountain. And also its secret, as only few locals know it. Because of some particular remains in the area, which are similar to those in the two archeological sites on *Donačka Mountain*, in this area, insofar as we are just getting to know it, there is a realistic possibility of some new example of stone art. After all, this is a newly discovered area.

On the fourth day of the field research, we explored the other lower-lying areas all the way to the southern foot of the *Donačka Mountain*. At the southwest foot of the mountain, the village is situated, named 'Saint George' ('Sveti Jurij') after the church standing above the village. If we look closely, the church stands on top of an earthen mound about 30 m in height, facing south towards the valley below, and north through the saddle touching the foot of *Donačka Mountain*. Mound, terraced in three height levels (including its top) is surrounded by the village of St. George on open sides. Along the eastern side of the earth mound leads a new asphalt road that covered the old road paved with stone slabs. Along this, according to local oral tradition Roman road, we found some interesting pieces of modelled stones. Where the old road is still visible, its outer edge is a stone slab with a hoof-shaped hole. The owner of the land,

mister **Anton Bukšek**, who reminded us of this stone, also explained, that it was a hole for draft animals. It is true, that at this point the road climbs visibly. As the owner interpreted it, this hole is supposed to serve as some kind of support which facilitated the ascent.

Higher on the road and near its inner edge there is a sandstone slab about 1 m wide, while the length is larger, but at the end which is below the surface. The stone is not from here, but from the neighboring hills on the other, eastern side of the valley. The *Log*, as this hilly area was named, was once considered the center of stonemasonry in wider region. Made from sandstone, quarried in *Log* area, is also a trough at one of the springs of the mountain, but is unfortunately quite destroyed. It is obvious, that the outer surface was more finely worked and decorated by stringing oblique lines.

A similar trough was recorded in the village of St. George, and again below the spring, to hold a water. Perhaps these troughs are of secondary use, and were originally sarcophagi from a Roman necropolis somewhere above the village St. George higher in *Donačka Mountain*?



The supposed Roman sarcophagus (above) made of sandstone, preserved at the bottom and used as a water trough from a spring. In the preserved places, it can be seen that the outer surface was finely treated (oblique lines). Below there is a stone with a hole placed on the edge of an old stone slab road, supposedly Roman.

Roman necropolis is attested in written sources, that also mention finds, including a sandstone sarcophagus.



SUPPOSED ROMAN ROAD - outer edge. This part of the route that is preserved runs for 30 m. The road leads in the direction of the church of St. Donatus and the protected archeological area under the multi-period settlement Dvor.

The location of the Roman necropolis, named 'Grobek' ('Small grave') is forgotten today. Sources place necropolis somewhere between the church of St. Donatus and the area around the strong spring, where the already mentioned archaeologist **Ciglenečki** located a late antique settlement. So, we researched the area between the Church and the spring, and further north-east up to Preval Pass (Prevala), but in this regard without any new insights. However, we found an overgrown area with a high concentration of circular shaped stones.



Rough-hewn millstone, which was broken during processing and then discarded. There are a few more locations on the mountain with pieces of broken millstones. Stonemasonry on the mountain has been documented since the end of the 19th century and was limited to the production of millstones for manual grinding. The stone suitable for this is quartz sandstone, which is abundant on the mountain. Given the fact that this type of stone was used to make millstones in the Roman period and

even earlier, a Roman-era settlement on the mountain may have been associated with exploitation of this type of stone.

The circular shaped stones are traces of stonemasons specialized for production of millstones, mostly for manual grinding of cereals. This craft, which, however, was more a kind of complementary activity, was witnessed on *Donačka Mountain* between the end of the 19th and the first half of the 20th century. According to the information, which we received from the last stonemason **Jakob Polajžer**, the location with the remains of rough-hewn millstones is one of at least 5 'quarries' on *Donačka Mountain*.

Among the broken millstones and ruins of drywall, very unusual rock is situated. A good 2 m long boulder, wide around 1 m with the shape resembling the head of a reptile. It may be a completely natural shape, but on the other hand, it is not the only reptile-head stone we know of so far. A few kilometers to the north and in the area of *Western Haloze Hills*, we found a slightly larger stone in the form of a snake head about three years ago. The mouth and eyes on this head were engraved. Virtually nothing is known about either stone.



The head of the reptile (left), which is most likely the work of nature, is located a good 50 m south of the five-sided monolith. To the right there is a deep engraving in the rock along the old road, which is most reminiscent of an arrow. It is largely damaged.

Otherwise, stone snake heads are known in western Slovenia and documented by **Pavel Medvešek**. They originate from the pre-Christian tradition, which was preserved in remote places also at the beginning of the 20th century, and where the belief in the power of stone played an important role. The mentioned source also documented an ancient religious ritual of choosing

a stone for a snake's head, its processing and placement in the most suitable place. For the snake's head, a larger egg-shaped pebble was chosen. Then eye holes were drilled into it, and the holes filled with a special filler. The stone was then consecrated, and at the end of the ritual, it was positioned in a place of special significance for the followers of the old faith. The difference between the snake heads in western Slovenia and the two from NE Slovenia lies in dimensions. The two snake heads, which we have discovered, are much larger.

Last but not least, there are some written sources and oral tradition which highlighted *Donačka Mountain* as the main gathering place for witches in *Lower Styria*. Witchcraft on the mountain is thoroughly attested in court records from witch trials in the 17th century. Major crimes against religion, god, and community took place somewhere high on the mountain. Witchcraft here could also be interpreted as an unknown pre-Christian belief. This could also be indicated by the choice of the patron saints of the nearby churches. Both churches on the south side are dedicated to the saints and martyrs known for similar acts. Both, *St. George* and *St. Donatus*, defeated the dragon. Or reptile (snake). The latter can also be interpreted as a symbol of pagan faith, that needed to be eradicated. And finally, we mention the meadow, below which the golden calf is buried. If we consider the context from the *Old Testament* (the Book of Moses), in which this phrase appears, then it is clear, that we are talking about false faith, in this case the worship of idols.

At the end, it is necessary to mention three stones, that we discovered years ago and on which there could be engravings. Unfortunately, we found only one. There is an arrow carved into it which points towards the sky and is slightly curved downwards. There are a few other incisions on the stone that could be human work.

BOČ

Boč Mountain

We are well acquainted with the *Boč Mountain* area, because we have been exploring it for at least the ten years. Nevertheless, this year we decided to check out some locations on the south side of the mountain and around the route of a medieval road. In year 2021 we completed two days of field research.

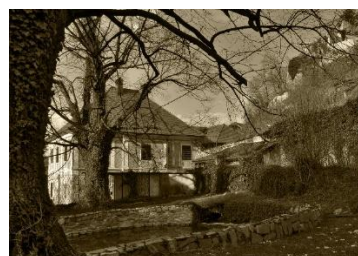
On the first day we focused on the area around the route of the medieval main road, that led over the *Boč Mountain*, and on the second day on the stone formations around the church of *St. Margaret*, where there is also a rock with traces of 'Devil's claws'.



The ruins of a medieval castle (about which practically nothing is known) above the monastery in Studenice and above the old, stone-built medieval path that led to the south side of *Boč Mountain*. As this route also includes late antique settlement remains (karst field '*Formila*'). Medieval road most probably takes same route, as older, Roman road. the settlement of an older, Roman route.

We started our first day of field research in *Studenice*, an old village at the northern foot of *Boč Mountain*. Sunlight does not warm it in the winter months. The reason for this 'unreasonable choice' for settlement is surely the famous healing spring, next to which an important Dominican monastery was built in the Middle Ages (13th century). The founder of the monastery, which was intended for unmarried noblewomen, was **Zofija Rogaška**, a representative of an important noble family from the town of *Rogatec*, whose name is mentioned in the famous epic '*Parzifal*' by **Wolfram von Eschenbach**.

The second reason for such a choice of the location of the village of *Studenice* is that there lies the nearest natural path from the north to the south side of the *Boč Mountain*.



STUDENICE DOMINICAN MONASTERY - the fountain is built on the site of the legendary spring, named '*Studenec milosti*' (Fountain of Grace). According to legend, the spring was the main reason that a monastery was built here at all. The spring water has a constant temperature of about 10 degrees Celsius.

In the ravine behind the monastery, there are four karst abysses from which water gushes after heavy rain. Here the pavers of the medieval road become visible. Its traces led us steeply uphill in the direction of the pass, over which we descend to a small karst field which the locals named *Formila*. The track of this road was described in a famous medieval travel diary from the end of the 15th century, also important source for medieval history of *Lower Stryia*, written by **Paolo Santonino**. The road is still clearly visible in some places. However, since it is no longer in use, it is already mostly overgrown. Higher up and not far from the pass, we found a stone showing signs of processing. On the surface of the stone, which is vertical to the floor surface, there is a drilled hole of a regular circular shape, which can also be seen on the other side of the stone. However, you cannot see through it, because the holes, which are otherwise connected, were drilled (or carved?) at an oblique angle.

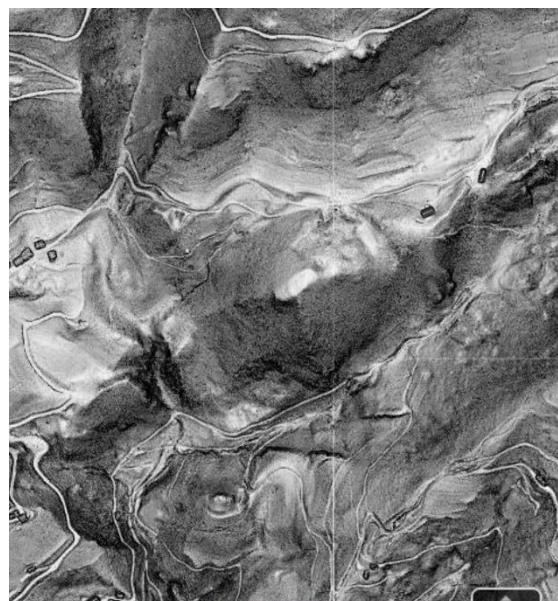


Karst field FORMILA on *Boč Mountain*. It is the crossroads of paths in the true sense of the word. The name *Formila* is interpreted by some as a '*forum millitae*' - military camp, which would be quite probable at this junction of the route.

Higher and behind the pass there is the already mentioned karst field *Formila*, where, according to oral tradition, the village once stood. But due to the unfaithful inhabitants, the whole village one day completely disappeared under the ground. It is also the place, where people in evening hours saw a huge white snake. Older historical sources listed some of the items, found here. Among them was a golden plate, presumably from Roman period, which is considered lost today. Otherwise, some older historians claimed, that the name '*Formila*' is derived from the Latin words '*forum militae*'. The position of the karst field is surely the most optimal place for a military outpost on the *Boč Mountain*, from which it is possible to effectively control the main road and close it. These are, of course, conjectures. So far, there have been no archeological excavations here. And secondly, it is no longer known where to look for old finds here. The only remain in *Formila* is a good meter of the road curb, with well-preserved stones of uniform size, in the shape of a square. *Formila* is also a crossroad at the junction of two smaller valleys with sinkholes areas in which streams disappear. The path, which comes from the east, is mostly in the line of the main ridge of the *Macelj-Boč Highland*. The second path, along which we continued our research that day, leads to the south side of a mountain to the village of *Kostrivnica*. After *Formila*, we stopped for awhile at the location, where our archaeologist suspected a late antique refuge. On the surface we found some fragments of pottery that could be of late antiquity. In the location with well-secured accesses, leveling and deepening of the ground is visible. Lower, above the village *Kostrivnica*, we inspected the modest remains of a small medieval *Castle Dor*, and then the old church of *St. Lenart* in a narrow valley that descends towards the village. We didn't find any example of rock art around the route from *Formila* to *Kostrivnica*.

On the second day of field research, we visited some particular locations on *Boč Mountain*, which is present in the oral tradition as place of special meaning. Stones and supernatural forces plays an important role in these stories. So, we set out to try to find the so-called *Devil's Stone*, on which there are supposed to be traces of his claws. This time we climbed the mountain from the south foot, through the area of an exceptional

rock formations of '*Galke*' ('*Gaul woman*'). Newer traces of modeling are visible on the rock at the beginning of the path.



The southern part of the track of the medieval route between Studenice and Kostrivnica. In the middle of the photo there is a leveling located to the left above the valley path. The leveling above the precipices represents the highest point of the late antique settlement, which continues in the valley north below it. At the lower left, a mound is visible to the right above the valley with a path on which there are the modest remains of Dor Castle, which is not mentioned in any written source.

Rock was transformed into a chapel with a niche. Otherwise, we didn't notice any other peculiarities in this area.

We spent much more time in the area where the *Devil's Stone* is situated. The story goes, that the stone was brought by the Devil, who intended to destroy the church of *St. Margaret* by it. It was his bet with God. If the Devil manages to bring the rock from village *Studenice* to *St. Margaret* before the end of the mass, the church will be destroyed. So, the Devil must beat the ringing of the church bell, announcing the end of the mass. The Devil ran out of time right in front of the church, where he heard the church bell and furiously dropped the stone to the ground. And this stone still standing a few meters behind the church, hiding in dense vegetation. There are actually several stones there, but only one has traces of Devil's claws. This particular stone having on the vertical side clearly visible five engraved lines around half a meter long that converge

towards the ground. Our final impression is, that these are most probably engravings, formed in a natural way. This is more likely, as traces of claws on this monolith form two semicircular grooves along its south side, which run obliquely and almost parallel. The 'u' -shaped grooves measures about 20 cm in thickness and a good 10 cm in depth. The bottom is evenly ribbed. The larger groove extends from the foundations practically to the top of the monolith, and the smaller one somewhere from half the height to the top. It is our opinion that these could be traces of stone breaking. The grooves are similar to newer, but smaller traces of stone breaking (max. 5 cm).

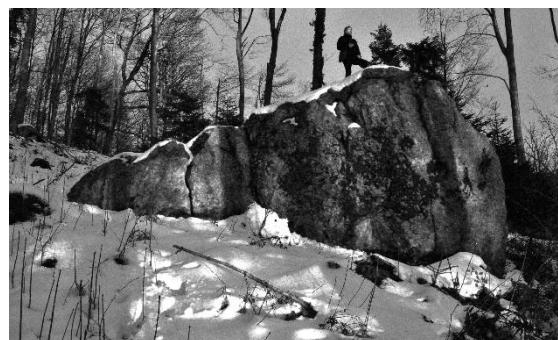
It turns out, that here there are many other unexplained remains. Between the *Devil's Stone* and the stone further to the west, which is of similar dimensions, there is empty space, through which it is possible to climb to the top of the stones. A surprise awaited us above – a plateau with a semicircular inner edge composed of small crushed stones on which a larger stone was placed upright.



DEVIL'S STONE near the CHURCH OF ST. MARGARETH. The monolith measures about 4 m in height.

The view from plateau towards the east directs the already mentioned empty space between the two rocks. Empty space is illuminated

by the rays of the rising sun around the vernal and autumnal equinoxes. A similar plateau, but a smaller one is also higher on the ridge, which above it passes into natural rock. Our impression is, that the original natural rocky ridge was to some extent reshaped. The choice of location was most likely prompted by the fact, that it is an area rich in water sources.



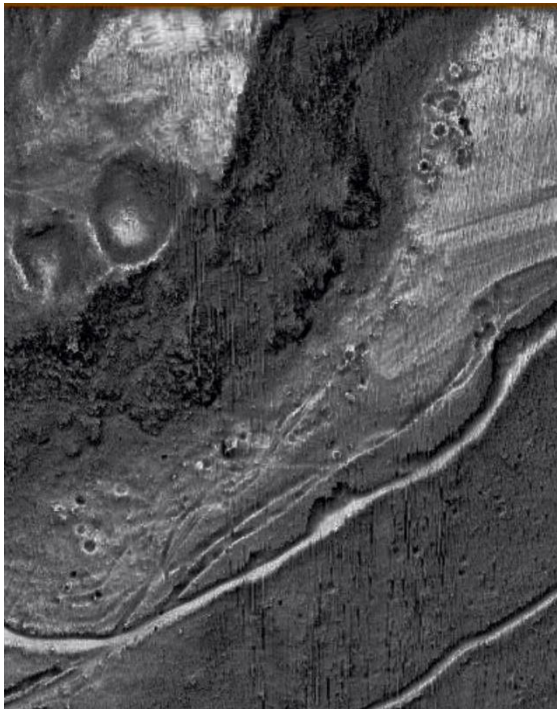
The formation NE from the Devil's Stone, which consists of at least 4 monoliths from the conglomerate (part of the formation is overgrown), is a rectangle in the ground plan, which is confirmed by measurements 'in situ' and LIDAR image of the area. The shorter side of the formation is aligned in the east-west direction, and the longer in the north-south direction. In the largest monolith (right), which reaches a height of about 6 m, there are a few centimeters of pebbles of quartz. The spring is next to the highest wall of the formation (right).

Two springs are in the immediate vicinity of the church of *St. Margaret*, and westward above the church there is a water pumping station of a public company. The fourth and the weakest spring comes to the surface below a large rock formation, situated northeast above the church. The formation is well visible from the rocky ridge with the *Devil's Stone* at its foot. Preliminary measurements have shown that the large rock formation and the *Devil's Stone* are in significant astronomical relation. If we look from the top of *Devil's Stone* in NE direction, we see rock formation at the line of horizon as the point, which marks the exact position of the sun rising on the summer solstice. In the opposite perspective (SW direction), the *Devil's Stone* marks the point on the horizon where the sun sets at the winter solstice.

Rock formation is situated on a larger leveling below the steep southern foothills of the *Hrastovec Summit (791 m)*, which protects the area from northern winds. A detailed inspection, which followed the cleaning of the area (the rock formation was completely overgrown), gave the

following insights about formation. At first, it turned out, that the rock formation is in fact an arrangement of several stones, standing side by side and with empty space between them. The formation is lowest at the northern end (about 1,5 m). Then in the southerly direction it rises steadily and reaches the highest point exactly at the southern end (about 6 m).

Secondly, it is located in an area, exclusively based on limestone. In this geological context, the rock formation presents a geological anomaly, as it consists of conglomerate stone.

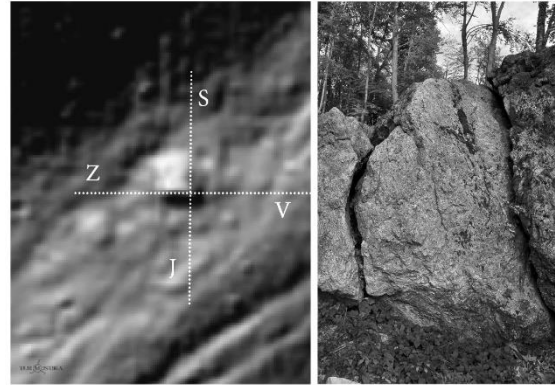


The image shows a rectangular floor plan of a conglomerate monolith formation (bottom left, above the path lines). To the SW and NE around the site, numerous circular structures are visible, which could be traces of lime extraction - lime kilns. Due to the above-average concentration of these, it is also possible that they are grave mounds. At the extreme NE of the larger leveling there are circular remains of dimensions that exceed the maximum volume of the limestone kiln by several times.

The biggest conglomerate stone contains smaller quartz pebbles (up to 3 cm). In the other conglomerate stones of rock formation, pebbles of the same size were identified, but from different material.

Thirdly, the main sides of the rock formation are aligned along the four cardinal directions of the sky. Longer vertical side of the formation, measuring about 8 m in length, is aligned exactly to north-south (0-180 degrees,

Polar Axis), and the shorter, also vertical side (about 4 m) is aligned to east-west (90-270 degrees, Equatorial line).



Relief photograph of the rectangular ground plan of the conglomerate monolith formation (left). Right monolith formation, second in a row in a northerly direction.

Fourthly, it is clearly evident from the description, that the rock formation has a rectangular shape in the ground plan. This was finally confirmed by aerial and LIDAR photography.

Fifthly. Under the moss which overgrew the south part of the rock formations and was removed, we discovered traces of breakage, quartz pebbles. These traces are most likely connected with the glassworks from the 18th century, which stood under the church of *St. Margaret*. Traces of breakage are found exclusively on the biggest conglomerate, which is made entirely of quartz pebbles. So, the material essential in making glass

Sixthly. On the south eastern edge of the biggest conglomerate there are not only traces of breakage, but also stairs, along which it is possible to ascend from the ground to the top. As we said, similar stairs were identified on the five-sided solitary rock from *Donačka Mountain*, and we know of two more such examples. These are *Devil's Rocks (Hudičeve skale)* above village *Kamnica*, formation in eastern *Kozjak Mountain*, and the stone near the snakehead in *Western Haloze Hills*.



At the top of the DEVIL'S STONE, in the background the Church of ST. MARGARET.

In the immediate vicinity of the large rock formation there are at least three rock formations with dimensions roughly smaller by half compared to the bigger ones, and a few individual stones. All listed examples are exclusively from limestone. Preliminary measurements of possible astronomical orientations were carried out, but in a very limited way, due to the considerable overgrowth of the surrounding vegetation. The final impression is that the formations and individual stones northeast above the church of *St. Margaret* are in significant astronomical relations. If this is confirmed by more accurate measurements, that these are well-thought-out layouts and therefore the work of human hands, will be even greater.

Finally, we must mention the other remnants in the terrace above church. A few meters eastward from the large rock formation there is an old path in the south-north direction. It is well visible in the LIDAR image, even better than on the spot. The path, probably for carriages, is out of use today and overgrown. The traces on the relief image show that it was used relatively often in the past. Before the path descends towards the karst gorge, which leads from the east to *Formila*, there are six smaller and larger holes at the northern end of the terrace. Their depth is increased by the earth embankments that line the hole. The LIDAR image shows that they have mostly perfect circular designs. The three largest circular designs are between 10 - 12 m in diameter. Since there is limestone in the area, we thought first, that these were holes in which lime was produced. However, when we later analyzed the data about lime extraction in Slovenia, we did not find any examples of such large holes. The largest lime production holes were no more than 3 m in diameter.

Even a partial look inside the circular formation reveals different traces. On the outer embankment of one circular formation there is a recent excavation that gives a partial view of its interior. It consists of a mixture of earth, smaller pieces of stone, smaller pieces of charcoal and smaller orange-red pieces of unidentified substance. A small fragment of ceramics was also found in there.

The LIDAR photograph shows that similar holes - at least 11 - are located around the conglomerate rock formation, with the highest concentration a few meter south-west from the rock. They could not be seen, because they are completely overgrown. With one exception, which, however, is in fact more reminiscent of a smaller funeral mound. It is slightly dug out over the top, and inside it there is no earth, but an admixture of reddish-brown color most reminiscent of slag. The same material filled the notches between conglomerates, as we realized during the cleaning of the conglomerate formation. Our impression is, that waste material was dumped at this site. The question is, whether we can connect it with the already mentioned old glassworks below the church of *St. Margaret*. Since it was situated lower, we are convinced, that the waste from the glasswork most likely wasn't driven uphill, because that would be impractical. It is more likely that the reddish-brown spikes can be associated with the largest circular depressions in the north side of the conglomerate formation.



The monolith NE of the Church of St. Margaret. The top of the stone is loaded with smaller stones of different types. Why people put them right on this stone, we didn't find out.

We can conclude with great certainty that we found some examples of the processed large stones. Our assumption is, that the stones are probably an important feature of a pre-Christian

cult site. This could also be evidenced by the choice of the patronage of the church. *St. Margaret* is known mainly for taming the devil, by chaining him. Depiction of saint in the outer niche of the church represent her exactly in this particular moment. But instead of the devil, there is a reptile on the chain.

We are expected to look for answers to what other remains in this place present themselves in the future, when we will be better equipped for this rather opaque terrain. Unfortunately, in 2021 we were unable to find the two special stones on *Boč Mountain*. The first is the stone of *St. Nicolas*, on which, according to tradition, the saint rested. The second is the stone called '*Baba*', about which we get the information, that its four sides are aligned with the four cardinal directions of the sky. We ran out of time, because we did not count on the many remains in the vicinity of the Church of *St. Margaret*.

GREBEN BOČ-MACELJ

Macelj-Boč Ridge

A one-day field research of the 34 km long ridge yielded no results. Perhaps this was also due to the great distance we set out to walk that day and the fact that we did not stay long in any individual place. In any case, we have identified certain areas with surface stone that would warrant closer investigation.



MACELJ-BOČ RIDGE - below the, to the east Donačka Gora, followed by Resenik Mountain and Macelj Mountain on horizon.

LOŠKA DOLINA in SNEŽNIŠKA PLANOTA

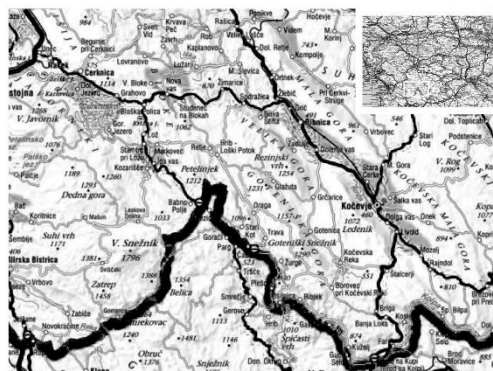
(Lož Valley and Snežnik Plateau)

The areas of the *Lož Valley* and the *Snežnik Plateau* are situated in *Notranjska region*, which is considered one of the most sparsely populated areas in Slovenia. Towards the east, the high plateaus of *Javorniki (Javorniki Plateau)* and *Snežnik (Snežnik Plateau)* descend into the lowland world of 'Notranjska Plains' (*Notranjsko Podolje*), part of which are 'Lož Valley' (*Loška dolina*) and 'Baba Field' (*Babno polje*). High Dinaric karst plateaus, such as *Snežnik Plateau* and *Javorniki Plateau*, are mostly overgrown with forest and uninhabited.

Today, the highest concentration of settlement is in the valleys and karst fields. It was the opposite in prehistoric times, when most of the settlements were on the tops of lower hills bordering the plain. In contrast to the flat area and its marginal hills, the *Snežnik Plateau* is an area with the largest closed forest areas in the territory of Slovenia, which continue across the Slovenian-Croatian border into the area of *Gorski Kotar*. Judging by the absence of archeological sites in the particular area of *Snežnik Plateau* above the *Lož Valley*, we could conclude, that this was the case in the past as well.

High concentration of archeological sites in the *Lož Valley* is explained by its geostrategic position. Area is southern part of the *Notranjska Plains*, which is the closest and easiest natural transport route between the *Ljubljana Basin* and the *Kvarner Bay*.

Fieldwork 2021 in Lož Valley and in north area of Snežnik Plateau



Our two-day field research took place at sites with material remains from prehistory, the Roman period and the Middle Ages, located above the present-day settlements of *Lož* and *Stari trg*. We also checked information about old house signs in *Lož Valley* and around *Cerknica Lake (Cerkniško jezero)*, which was provided to us by our external collaborator **Rudolf Baloh**.

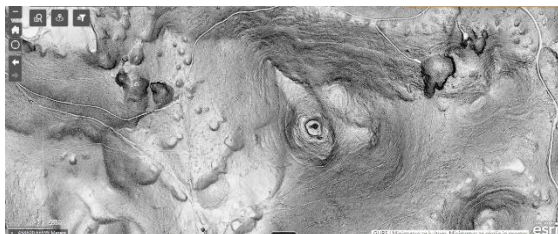
Additional two days of research were conducted on the areas around the main road via the uninhabited and opaque *Snežnik Plateau*, which connects the *Lož Valley* with the *Reka Valley*. Main reason for this choice was an accidental discovery during the preparation for this terrain. Above this particular road, a large area with terraces was identified on the LIDAR image. It is situated at an altitude of about 1100 m, and we wanted to check, if the terraces are a geological phenomenon, or the work of human hands. In this case, we were hoping for a possible remnant.

Further west we wanted to visit the underground cave - *Iapodes Cave*, where old engravings were discovered years ago.

LOŠKA DOLINA

Lož Valley

On the first day of field research in *Lož Valley*, we visited the two most important prehistoric hillforts in the area, *Križna gora* (*Cross Mountain*) and *Ulaka*. Hillfort at the top of *Križna gora* is dated to Late Bronze Age and the period of Iron Age. The most prestigious archeological finds from this site were excavated on a large mound necropolis on the west side below hillfort. We examined the area in more detail. This was followed by a one-hour tour of the magnificent *Križna jama* (*Cross Cave*), located at the northern foot of *Križna gora*. Traces of older prehistoric periods (pottery) and cave bear bones were also found in the cave.



Relief image of the archaeological site *Križna gora*. The core of the settlement is located in the right half of the photo. To the left below the settlement is a mound necropolis.

The engravings in the cave (mostly the signatures of visitors with the date of visiting the cave) are at most a century or two old. Older engravings have not been discovered so far. From here we climbed the marked path, which in some places follows the old path, to the top of *Križna gora*, where we saw the prehistoric wall and rock pier at the top. In the whole area, we did not find any engravings or other examples of rock art.



ULAKA HILL – a relief image of a multi-period settlement at the top of a hill, today hidden in dense vegetation.

The second area, which we visited this day, are the remains of the hillfort on *Ulaka Hill* above the village *Stari Trg*. The top of the hill was inhabited in Iron Age and also later in the Roman period when 'castellum' presumably have stood here. Remains, specifically drywalls, basis of objects and paths are more preserved than on *Križna gora*. The area is not as large as the prehistoric complex on *Križna gora*, and the location of the necropolis is not known. Finally, we found nothing related to rock art.



CASTLE LOŽ (Castrum Lass) - The once mighty *Lož Castle* was built on the site of a prehistoric fort. In the corners of the castle there are large inbuilt stone blocks, which are most likely Roman. At the place where the wall of the castle from the 12th century is open, it can be seen that an older building was built into it - probably Roman.

On the second day we visited the third location above village *Lož*. At the top of the hill there are remains of a small prehistoric fort, and inside its defensive wall, carved into living rock, there are the ruins of Medieval *Castle Lož* ('*Pusti grad*'). In the afternoon, we documented some old house signs.



A relief image of *Castle Lož* (hill right above the town *Lož*, above). At the top of the neighboring hill (below), the remains of a prehistoric settlement with defensive wall can be seen.

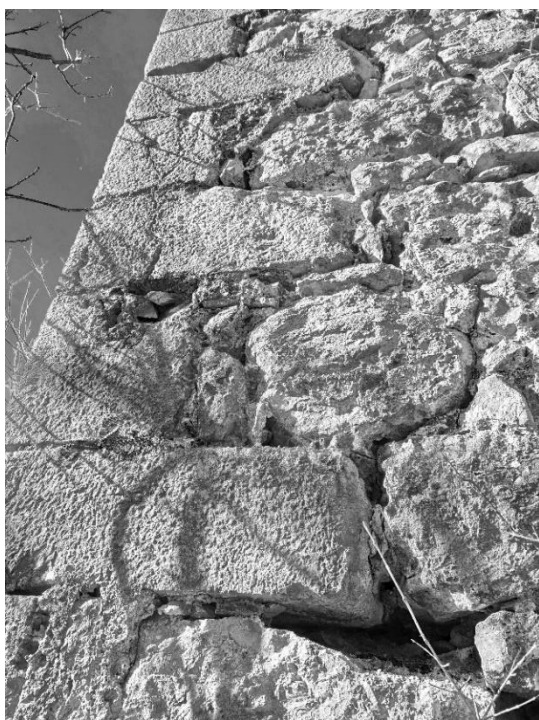
The mighty castle ruins at the top of the hill above *Lož* are situated in the area of the former prehistoric fort. Like the previous day, we did not find any examples of stone art in this location. The main surprise at the site was the insight, that the mighty *Castle Lož*, first mentioned in the 13th

century, was built on the edges from large pieces of carefully carved stone, which is not in the walls between the edges.



The side exit from the castle in its eastern wall was built of different carved stone than the castle wall. In the wall on both sides of the exit, the wall of an older building is visible, the stones of which were probably used in a few more places of the castle (junction between the walls). The stones in the vault are also fine smaller stones. Since we can only see them in this place of the castle, they probably belong to an older building.

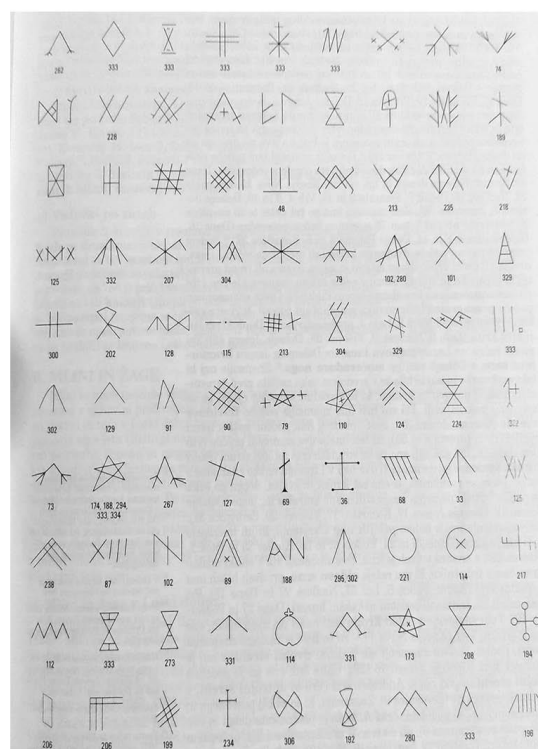
It turns out that these stones were originally part of some other building, definitely older, as the castle was built from them.



The junction between east and south castle wall is of stone of another kind, whereas the other stones in the castle walls are from the location of the castle. The stones at the junction are artfully carved squares with a finely worked surface, as opposed to roughly carved stones with untreated surfaces. Similar finely worked stones, but of slightly smaller dimensions, are also visible in the walls of the aforementioned side exit.

The final proof we find in the residential part of the castle, an arched door through the walls in a completely unexpected and atypical place for the castle. It turned out that the arched entrance was subsequently walled up in the castle wall and that it was obviously a Roman-era building, most likely a *castellum*, which sources therefore wrongly place on top of the already discussed *Ulaka Hill*.

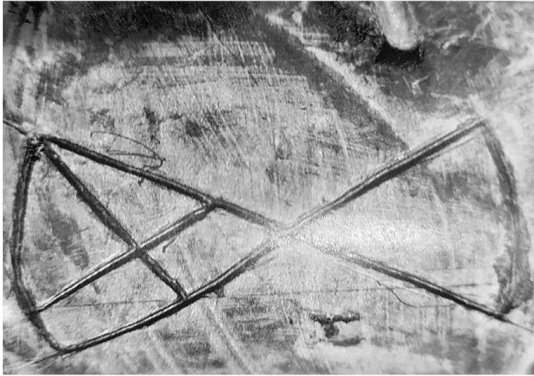
In the afternoon, we documented some old house signs in *Lož Valley*. Valuable hints on this topic were given to us by our host from the village of *Podcerkev*. An article about house signs is the work of the local pastor **Kebe**, and was published in the monography about *Lož Valley*. The article included a list of house signs and photography. House signs in *Lož Valley* and around *Cerknica Lake* are at least 200 years old. The author **Kebe** reckons, that the signs are older than the first house numbers that appear in the area after 1770.



90 old house signs from the area of the Lož Valley and Lake Cerknica (author Kebe).

House signs mostly consist of simple lines and were carved, drawn or cut by the owners of the homestead on a wooden or iron tool frame (hammers, chisels, drills, pitchforks, rakes, traps ...), on milestones or into trees for demarcation of estates. Among the house signs there are also

examples of old symbols, that can be find in the repertoire of prehistoric rock-art.



About three-quarters of all signs are original or not copied. More than 30 signs contain a Greek



or Latin cross, seven of the signs have the image of a double cross, eight of them have pentagrams, there are also signs in the shape of a circle, bird's feet, sand clock (or symbol of Orion), Star of David, Andrew's Cross (46 signs). In total, the author listed 159 signs.

The author also notes that it is difficult to determine the original meaning of the particular sign, which has long been forgotten.

SNEŽNIŠKA PLANOTA

Snežnik Plateau

During the preparations for this terrain, we came across a few sources with the assumption, that on the top of *Ulaka Hill* there was a prehistoric city, named *Terpon*. On the old map, once owned by **A.T. Linhart**, famous Slovenian historian from the 18th century, *Terpon* is situated right next to the *Lož* village (*Lass*). *Terpon* was mentioned by **Cassius Dio**, **Apian** and **Abial from Alexandria**, three antique historians, in the context of the war between *Romans* and *Iapodes*, a prehistoric tribe, then living in the southern areas of *Notranjska region*. *Iapodes*, mixed *Illyrian-Celtic* tribes (**Strabo**), had been a disturbing factor since the time of the Roman Republic. **Cicero** writes of peace agreement between the *Romans* and *Iapodes*. There was more than a century of non-payment of the annual tribute and occasional marauding incursions of *Iapodes*, which was then regularly followed by Roman military intervention in '*Iapodia*'. That vicious circle was finally finished by **Octavian**, the future emperor **Augustus**. In year 35. BC, **Octavian** gained power over the Western Balkans and began a bloody war with *Iapodes* and other tribes. In the final stage of the war with *Iapodes*, Roman legions occupied *Terpon* which surrendered. Then followed the siege of *Metullum*, the capital of the *Iapodes*. The fortified city, surrounded by several walls, did not surrender. So, a long and bloody siege followed, during which **Octavian** was severely wounded and the Roman army on the verge of defeat. The opposite side was also exhausted and negotiations followed. These were taken advantage of by *Romans*, who negotiated to enter the city with a false promise.

For the *Iapodes*, this was the end, but they did not give up and fell to the last man in the fighting that followed. Those *Iapodes* who did not fall in battle preferred to die rather than become Roman slaves. After the victory, city of *Metullum* was demolished to the ground by the Romans.

Judging by the reports of ancient historians, it could be concluded that the cities of *Terpon* and *Metullum* were relatively close. This thesis is also supported by the already mentioned Linhart's map from the 18th century, where

Metullum is located a few kilometers northeast from *Terpon*. Exactly, on *Bloke plateau* ('*Bloška planota*') above the *Lož Valley*, in the area of the village with a similar sounding name '*Metulje*'.



A view on the Lož Valley from Lož Castle in the south direction. On the right in the foreground there is the village of Stari trg and the foothills of Ulaka Hill, and in the background there is the mighty mass of the Snežnik Plateau with the highest peak Veliki Snežnik (1798 m).

Since the city of *Metullum* was demolished to the ground by the *Romans*, it is not known today where it was actually located. There is also no consensus about the part of the territory of the *Iapod* tribes (included also mountainous areas of *Croatia* and ended eastward at *Bihac* in western *Bosnia*) in which *Metullum* was situated.

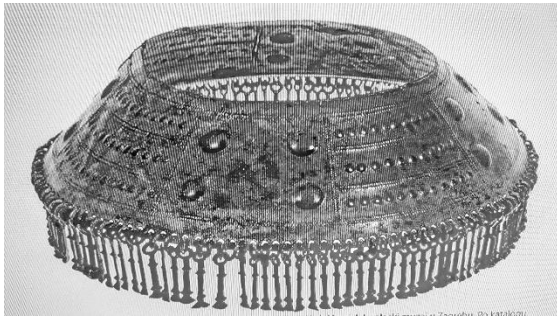


Map of A.T. Linhart, on which the Japodian cities of *Terpon* and *Metullum* are marked. Linhart placed *Metullum* on the *Bloke plateau*, near the village of *Metulje*, and *Terpon* near *Lož*.

If we take into account the old map from the 18th century, the prehistoric city was drawn near the village *Metulje*. It is true that south, west and southwest above the village there are three archaeologically protected areas. Two sites were marked as 'sites with increased archaeological potential', because assessment was made on the basis of surface traces, which are not specified. The third site (the archeological site of *Stari grad*) is interpreted as the Early Iron Age and later the

Roman period settlement. Otherwise, we didn't find any expert publication about this particular site. So, information about the area around *Metulje* is very modest. And not only this. Today, this thesis is no longer defended by anyone, except the inhabitants of the village *Metulje*, who use it on an information board in front of the village.

Modern and post-modern Slovenian archeologist and historians mostly support the general thesis, that *Metullum* was somewhere in the *Notranjska Region*. In this context, the most exposed location is the prehistoric hillfort near the village *Šmihel* (St. Michael) below the *Nanos* (Nanos Mountain). Namely, large quantities of different weapons were excavated there, which are supposed to testify to the clashes with the Romans.



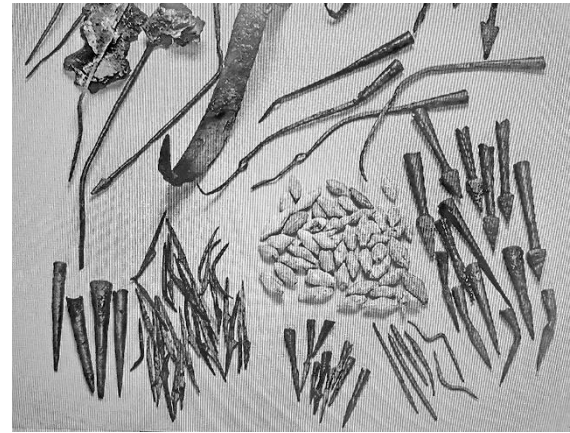
A bronze cap testifies to the metallurgical and toreutics knowledge of lapodes, and to their aesthetic sense. The cover was found near Ogulin in Croatia.

However, the Croatian professionals are convinced, that the city stood near the town of *Ogulin* in the current *Croatia*. The general impression is that their claims have a more realistic basis than the *Slovenian* ones. They have a prehistoric high fortress with a triple defense wall, which stood on two peaks (as *Metullum*), and a *Roman* votive stone dedicated to the so-called 'genius loci' with the letters 'ME ...'. Since the rest of the inscription is missing, it is premature to conclude that inscription '*Metullum*' was carved on the votive stone. And also, between the two summits on the *Kapela Hill* south of the town of *Ogulin*, there is no narrow valley which the antique sources describe near *Metullum*, but a saddle.

According to the fourth claim, the capital of the *lapods* was somewhere near the present-day town of *Bihać* in the northwest of *Bosnia*. The fact is that extremely rich *lapods* tombs have been

found in the area, which is not yet proof in itself.

Fifth claim, or better hypothesis, is ours. It concerns a large area with terraces in *Snežnik Plateau*, which we discovered on the LIDAR image during preparations for this terrain research.



Weapons excavated at the site of the large prehistoric fort of *Šmihel pod Nanosom* (Nanos Mountain) undoubtedly testify to the siege, but they are not necessarily proof, that *Metullum* once stood here.

It turned out, that the terraces are not geological phenomenon, but man made.

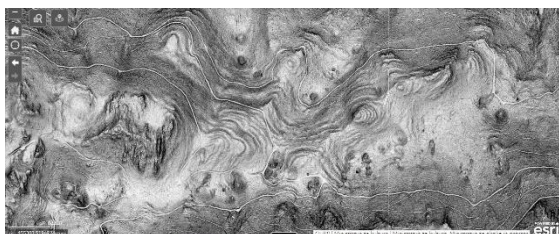


Finds from *lapodes* graves, Croatia.

Some peculiarities of this unknown site agree with the descriptions of ancient historians. **Apian** wrote that the city was on two summits, lower and higher. **Cassius Dio** wrote similarly, but more exactly, that *Metullum* was located on a densely forested mountain, exactly on the tops of two ridges, between which there is a narrow valley.

The remains which we discovered are located in a densely forested area, at an altitude of

between 1100 and 1200 m above sea level. Secondly, the concentration of terraces is on two ridges separated by a narrow gorge with a water source and sinkholes. Thirdly, the compact area with terraces occupies at least 30 ha and stretches for about 2 kilometers, which would correspond to the dimensions of a prehistoric city.



The area with terraces stretches for a good kilometer and a half and is between 500 and 800 m wide. According to our rough estimates, there are at least 30 ha of areas with terraces.

Fourthly, right below the location is today's main and only route between *Lož Valley* and the *Reka Valley*.

On the third and last day of our field research, we got to know the areas around the old route, which connects *Lož Valley* and *Reka Valley* across the extensive and opaque *Snežnik Plateau*.



ŠMARATA HILL above KOZARIŠČE - The route of the old path across the *Snežnik Plateau* leads from the *Lož Valley* past the village of Kozarišče and the *Šmarata Hill*, on which a prehistoric hillfort (defensive wall) has been preserved. The prehistoric fort is visible in the photograph above the village. Below the village (left side) is a circular structure located in an archeologically protected area with Roman remains. The path then reaches *Castle Snežnik*, built next to a strong karst spring, and from there begins to climb the *Snežnik Plateau*.

The route of the road runs first south of *Lož* and *Stari trg* toward the village of *Kozarje*. Above the village, on top of smaller hill *Šmarata* are remains of a prehistoric hillfort (defense wall). Soon after the village is the old *Castle Snežnik*, which was built beside the karst spring at the foot of *Snežnik Plateau*. Water from the spring filled the artificial lake that surrounded the castle whose only connection to the mainland was the drawbridge. It is obvious, that *Castle Snežnik* was intentionally situated near the main and only route,

that leads across the *Snežnik Plateau* in a westerly direction to the town *Ilirska Bistrica* and the valley of the river *Reka*.



CASTLE SNEŽNIK - The castle was first mentioned in written sources in 1268. Today's castle is mostly from 1461, when the castle was mentioned under the name *Sneberk* (*Schneeberg*).

In the first part of the path above *Castle Snežnik* there is only one protected archeological area, marked as the 'site with increased archaeological potential' and probably prehistoric. The next protected archeological sites, about which more is known, but still not very much, are around the last part of the route, before it descends into the valley. In the intermediate area there is not even one officially registered site. The remains we discovered are located approximately in the middle of this area and a few hundred meters above the road.

We found the location without any major problems. The area with terraces of at least 30 ha is located about 3 km north of the highest peak of the *Snežnik Plateau* (*Veliki Snežnik*, 1798 m). Because of this, we expected a shady location, but it was just the opposite. We were at the location in the month of November, when the sun was already close to the extreme southern point and low in the sky. Although located on the northern slope of the highest peak, it is far enough from it and also open enough to the east and west, so that it is bathed in sunshine during the day. On top of that, it's a windless position, at least in the areas we walked through. There is also a water spring in the area. It is no doubt, that this area has sufficiently favorable climate and other conditions for settlement. And finally, the area with terraces at the top of the ridges is well protected by natural terrain features, and at the same time allowing for an overview of an important route a few hundred meters lower. Views from the location to the

north, east and west are open and far-reaching. We assume that important archeological sites in the wider area are visible from different points of the ridges, but we have not been able to verify this.



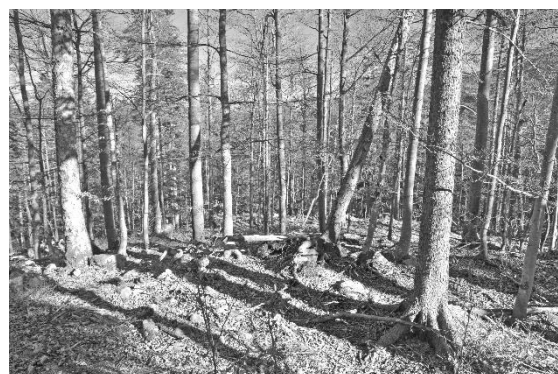
Location of an unexplored settlement on the northern side of the Snežnik Summit. On the photo is one of the many stone-paved paths paved with stone debris that runs between the terraces.

The terraces are clearly recognizable and are undoubtedly the work of human hands. The terraces are filled with larger pieces of crushed stone, which is densely concentrated on the outer edges. Many paths run between them, the surface of which is made of well-paved stone debris. In one place we also came across a few ditches measuring a maximum of 30 m in length. Finally, on some terraces we had an impression, that there is empty space under them.

We were not able to inspect the entire area this time, because it is huge and there are too many remains for closer inspections. Despite the high altitude and the fact that it is an uninhabited area today, it could be argued that its microclimatic conditions and sunny location provide good enough conditions for settlement. In addition, the location is situated above the main path between the *Lož Valley* and the *Reka Valley*, which has been proven to be in use in the Middle Ages, and most likely even earlier. The strategic importance of the area is evident by the many recent remains of military facilities and infrastructure left behind by the Italian army. Therefore, our assumption is that we are dealing with ruins of unknown age.

In the perspective of our past research, this area is also important. It provides additional evidence for the existence of larger settlements in the altitude above 1100 m. which has not yet been

discovered in Slovenia. Including the area on *Snežnik Plateau*, we currently know of at least four areas with remains: *Eastern Pohorje Plateau* (1100-1300 m); *Košenjok Mountain* (1100 – 1400 m) and *Paški Kozjak Mountain* (1100-1250 m).



Wide terraces at an altitude of about 1120 m, which descend in steps. There is enough space for facilities on them. In addition, there are strategic advantages to the location (difficult access, control of the main road, exceptional panorama of the northern horizon). A special feature of the micro-location, which also has a water source, is the favorable climate (protection from southern winds, higher temperatures) and enough sunlight even in the winter months.

Facts show, that the area high on *Snežnik Plateau* is an extremely large site for Slovenian conditions, and secondly, at uncharacteristic altitude. In addition to the other issues, it is not so important in this moment, whether these are in fact the ruins of *Metallum* or not.

ENODNEVNE TERENSKE RAZISKAVE V SLOVENIJI 2021

One - day field researches in Slovenia in 2021

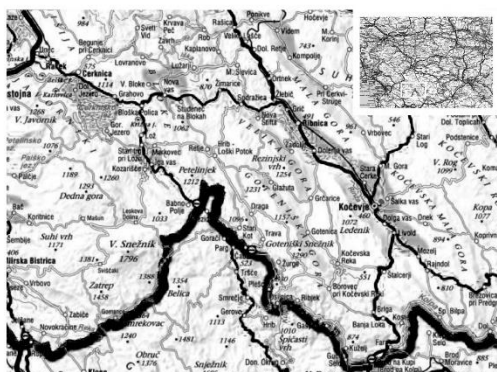
We conducted 8 days of field research in different parts of Slovenia:

- (1) In the *Julijske Alpe (Julian Alps)*, we visited *slap Peričnik (Peričnik Waterfall)*, *Dolina Radovne (Radovna Valley)*, *Kot (Kot Gorge)* and *Pokljuška soteska (Pokljuka Gorge)*;
- (2) *Željske jame (Željne Caves)* near *Kočevje*;
- (3) *Jama Pilanka (Pilanka Cave)* in *Huda Luknja (Huda luknja Cave)*;
- (4) *Jama Nelojača (Belojača Cave)* in *Haloze (Haloze Hills)*
- (5) *Vače (village Vače)*, famous *Hallstatt* necropolis and hillfort.

With the exception of the *Belojača Cave*, we explored the listed areas for the first time. It should also be emphasized, that the main goal was to get a 'basic picture' about certain areas.

ŽELJNSKE JAME

Željne Caves

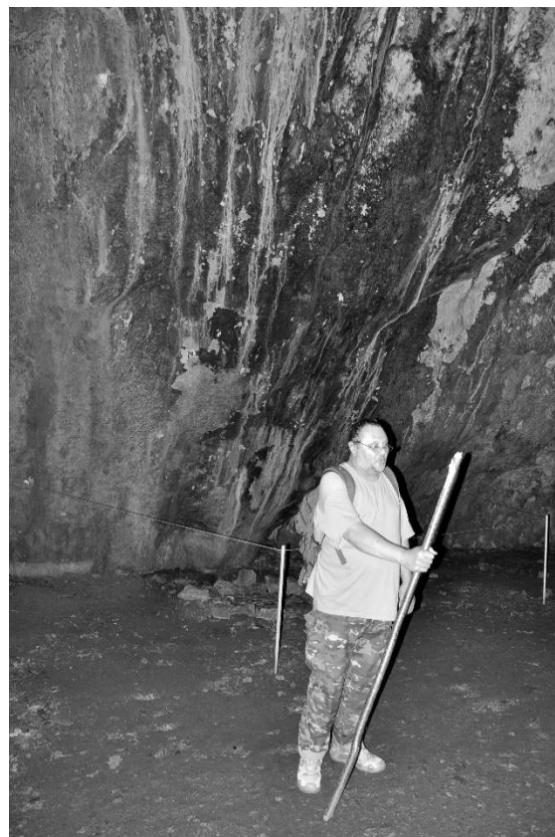


In the middle of a hot summer, we visited the picturesque Željne Caves (*Željnske jame*) near Kočevje. The cave system with underground water is a natural landmark and also an multi-period archeological site.



ŽELJNE CAVES - a picturesque entrance to the cave system, from which flows the water that fills the Rudniško jezero in its vicinity(Rudnik's Lake).

The oldest material remains are from Paleolithic period. In the part of the cave with surface water there are black spots on the walls, interpreted as traces of prehistoric fireplaces. The only engravings we saw in the cave are from the late

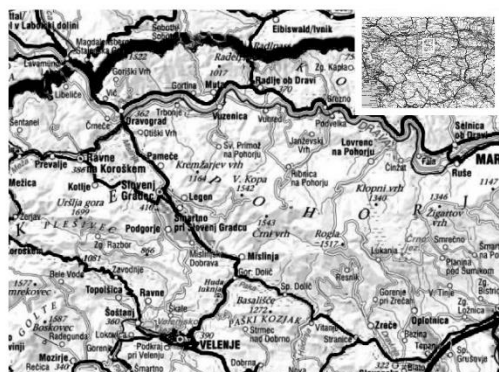


INSIDE ŽELJNE CAVES - The wall with traces of ancient burning is specially protected. In the photo is our external collaborator Rudi Baloh, who gave us the first information about the house signs in the Lož Valley.

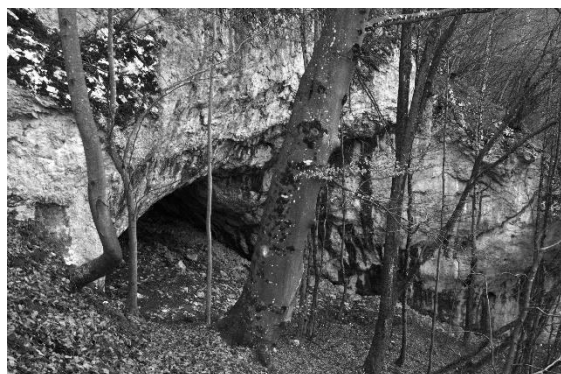
19th century. Because it is an extensive cave system, we have been able to explore it to a limited extent. It also turned out that we will need stronger lights in the future. Therefore, it is quite possible that we missed something in the caves.

SOTESKA HUĐA LUKNJA

Huda luknja Gorge



The second cave with archeological remains which we took a closer look at, is *Pilanka Cave* in the *Huda luknja* gorge. We were there in march 2021. Official data about the cave are modest. The cave have been inhabited in prehistory, as well as in the Roman period. Last information was confirmed 'in situ' by surface finds - fragments of pottery from Roman period.



ENTRANCE TO THE PILANKA CAVE is located on the extremely steep slopes of the Huda luknja Gorge, about 150 m higher than the bottom of the gorge along which the Paka Creek flows.

There are also remains of a dry stone wall in the cave, which partially closes the access to the inner hall of the cave, which is slightly smaller and on a higher level. The temperature in this part is a few degrees higher, which one feels as soon as one steps past the wall. In front of the cave there are some interesting stalactite forms. But we did not find any traces of engravings or some other form of rock-art. In the immediate vicinity and below the



Inside PILANKA CAVE - Dry wall of larger pieces of untreated stone that partially closes the passage between the entrance area and the interior of the cave where the temperature is significantly higher. Although it looks old, this wall is not mentioned in any source.

Pilanka Cave there are two additional karst caves, At the bottom of the gorge is *Huda luknja Cave*, which opened for tourists a few decades ago, but is now closed.



Stalactite and stalagmite from the PILANKA CAVE. At the base of the stalagmite were five fragments of Roman-era pottery visible in the photograph (bellow in the middle). The impression is that they are not in their original position, but they must have been found in a cave by someone and placed next to a stalagmite.

Above it is *Špehovka Cave*, also an archeological site, and in this particular case very important. It is one of the handful of archeological sites and Slovenia with traces from the Mesolithic period. In 2022, we plan to visit both caves. We ran out of time this time, as we focused on the rocky ridge above the caves, including the three main peaks. Unfortunately, this terrain was without any discoveries or new insights.

JAMA BELOJAČA

Belojača Cave

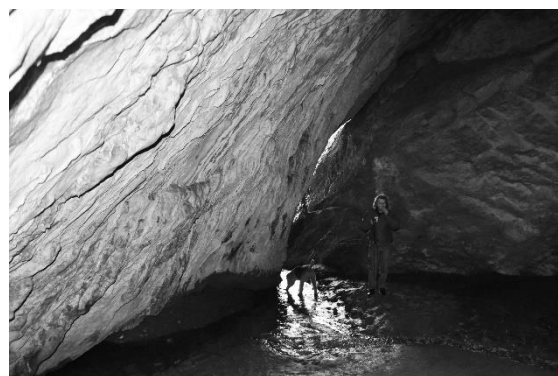
The third cave, which we visited in 2021, is jama *Belojača* or. *Balunjača* (*Belojača* or *Balunjača Cave*) in *Zahodne Haloze* (*Western Haloze Hills*). We had known about this cave for many years, but this time we took a closer look at the area around the entrance to it, specifically the wall above the stream which flows from inside.



BELOJAČA CAVE - the entrance to the karst cave, which is one of the deepest in Lower Styria. A stream flows from the cave, the murmur of which bounces off the walls, creating an exceptional sound image.

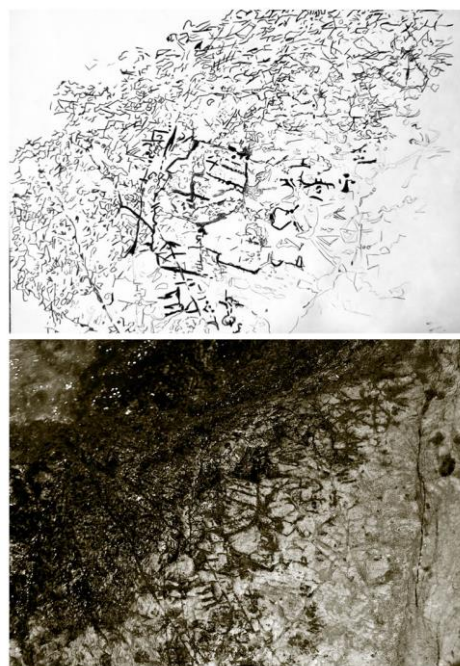
As the horizontal rock surface above the stream is more or less smooth, our attention was drawn by a concentration of engravings (simple lines and dots) on an area of around 50 x 50 cm. The next engravings on an approximately the same area are located two meters higher, this time on a vertical surface. We didn't see anything like it inside the cave. It is difficult to assess if these engravings are really the work of human hands. The fact, that we identified the concentration of engravings only in two places at the entrance to the cave, may point to that. But, we must highlight, we examined more closely the entrance hall, and therefore only the beginning of a larger cave system (around 300 m long cave tunnel with a larger hall). To enter the cave safely, we would need the appropriate equipment, which we cannot

afford at the moment.



BELOJAČA CAVE - inside the cave. An entrance hall with interesting stalactite formations and a stream that originates from the cave wall (left).

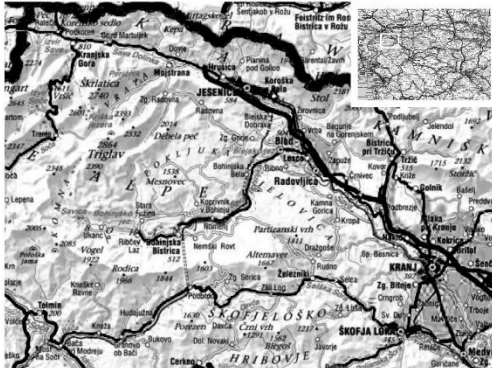
The *Belojača Cave* is not registered as an archeological site. But oral tradition suggests the possibility that the cave was inhabited in the ancient past. There is an old report that pieces of old pottery were found in *Belojača* on *Boč Mountain*, which has never been confirmed. After all, there are two karst caves of the same name on *Boč Mountain*. The cave with the alleged engravings is at the foot of *Boč Mountain*, and the other, which does not reach more than 10 m in depth, is below its top. If true, then this pottery was found in the larger cave, with an interior of a constant temperature, and also water, which the cave below the top of *Boč Mountain* doesn't have.



Supposed petroglyphs on the edge of the stone bed of the stream and just before the entrance to the *Belojača* cave.

JULIJSKE ALPE

Julian Alps



At the end of May 2021, we visited a few areas in the *Julijske Alpe* (*Julian Alps*). Unfortunately, we were not able to do field research on the mountain pastures above the town of *Tolmin*. In the last decade, at least two circles, made from stones were discovered here, on an altitude around 1300 m.



VRATA GORGE - view of the northern wall of Triglav (2863 m), the highest peak in Slovenia.

Janez Bizjak, the discoverer of the stone circles, also wrote a book about the phenomena of 'megalithic circles' in *Julian Alps*. He claims, that 'Krn stone circle' was erected during the Copper Age or around 2500 BC, which he substantiates with surface finds 'in situ'. The area with the stone circle has not been registered as an archeological site so far. After all, **Bizjak** discovered something, that still doesn't exist for Slovenian archeology in our country. **Bizjak** also mentions other type of 'non-existent' material heritage in Slovenia. We found this out a few months after our field research. An invitation to his recent lecture

highlighted his new discovery - rock engravings. We look forward to his more concrete presentation of the discovered engravings.



The Peričnik Waterfall is actually represented by two waterfalls - the lower and the Upper Peričnik. Next to the pool into which the water of the upper waterfall falls (pictured) is a standing stone (around 3 m in height).

We went exclusively along the northern edge of the Julian Alps. The first field trip took place along the *Vrata Gorge* (*soteska Vrata*), along which the mountain river *Triglavska Bistrica* flows. Possible engravings were encountered in the area of the *Peričnik Waterfall*. The first stone is located at the beginning of the ascent to the slope. Its surface has line engravings that intersect at right angles and there is also relatively similar spacing between them. Natural cracks in the stone are visible among the engravings that do not look old. Perhaps the purpose of these engravings is quite



practical.

The stone, located along the path to the Peričnik waterfall, is interspersed with a network of notches, which in some places seem chaotic. The impression is that the notches in the surface of the stone are made by machine.

The surface of the stone on which visitors to the *Peričnik Waterfall* tread daily, would be significantly more slippery without these engravings.



Upright stone under the upper *Peričnik Waterfall*. About half the width and 2/3 of the height of the stone is a circular recess.

Below the upper *Peričnik Waterfall*, we observed max. 3 m high vertical rock at the outer edge of the pool, into which the water column of the waterfall breaks. It should be noted that there is no longer any upright rock around the pool, not even such a large piece. On the surface of the rock, which resembles an upright isosceles triangle in shape, there is, about 2/3 of its height, a round hole in the middle. It only caught our attention after the trip while viewing the photos, because we didn't notice it 'in situ'.

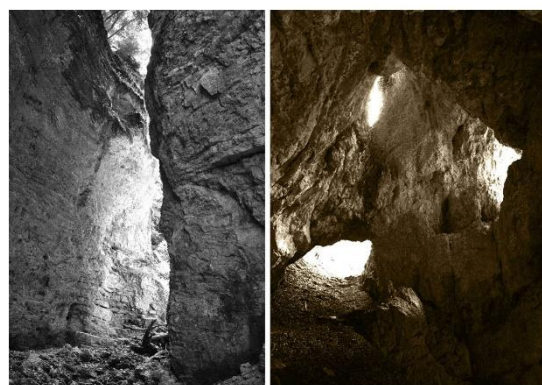


VELIKO KREDSKO JEZERO (Great Chalk Lake) - is man-made, as is a smaller lake (Little Chalk Lake). Chalk was excavated at this place more than a century ago, and the excavations were then flooded. Due to the layer of chalk, water in the lake has a special color.

Our visit to the northern areas in Julian Alps also included the *Radovna Valley*, the *Malo Kredsko jezero* (Little Chalk Lake) and *Veliko Kredsko jezero* (Great Chalk Lake), the *Kot* (Kot Gorge) under the northern wall of *Triglav* (Triglav Mountain), and

the *Poključka soteska* (Pokljuka Gorge). As far as new discoveries are concerned, our terrain research was fruitless.

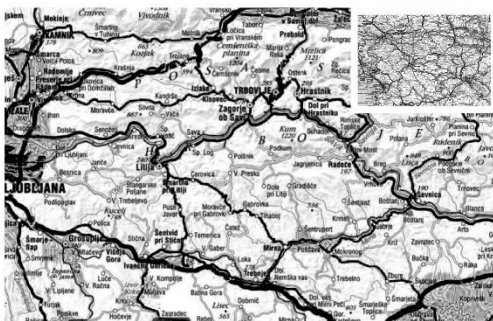
But two facts cannot be ignored. For the first time, we did not have any information on potential examples of rock art in these areas. And secondly, that we learned about the areas only within a limited time frame and more in a more general manner. Therefore, we are returning to the *Julian Alps* in the coming years, especially to the areas with supposed engravings, megalithic circles and other remnants of prehistory, about which **Janez Bizjak** wrote.



POKLJUŠKA SOTESKA (Pokljuka Gorge) - a picturesque karst gorge, through which the old trade route once led.

VAČE

Village VAČE



In December 2021, we visited the famous archeological site *Vače* above the *Litija* town. The village *Vače* is most known as a site with many finds of valuable objects from Iron Age. Among them, famous bronze situlae (so called *Vačka situla*) stand out. There are some of the oldest figural depictions on urn in toreutics technique, as animals and representatives of society from the Early Iron Age.



VAČE - a relief image of an area with a prehistoric settlement (in the left half of the photo, the brightest parts representing the flat terrain) and a necropolis (in the left half, right below the fort).

Firstly, we took a closer look at the necropolis with famous finds, which are now scattered throughout the world's most prestigious museums. Most of the excavations here were carried out in the last quarter of the 19th and in the beginning of the 20th century, when the site became world famous. The remains of the excavations of that time are still clearly visible on the terrain. Close to these remains stand the information boards with precise description of the finds, so that the contents of each grave are well presented. But contrary to contents, the data about the graves, especially their forms, are scarce.



VAČE - a relief image of the famous necropolis (in the middle). The necropolis ends in the direction of the fort with a large, mound-like form (left end of necropolis, where two paths meet). This is one of the several necropolises that belong to the fort, but the richest archeological finds have been excavated here.

It is known only that there were both skeletal and cremation burials, and that human remains were covered with stone slabs. We haven't find any information, if there were burial mounds here. Earth remains, where the famous bronze urn (*'Vačka situla'*) was found, are most likely the preserved perimeter of the mound. It is similar to the graves found on the other side of the path as the original shape of the grave is no longer visible today. These graves are lined up at the foot of an earth mound which measures about 10 m high, 15 m wide and about 30 m in length. Since some graves were also located on its top, we conclude, that the mound most likely represents a large burial mound, in which members of a certain clan are buried over time (such mounds are known around 30 km further south, in village *Stična*, *Dolenjska Region*).



At the eastern foot of the earth mound excavations are visible and lined up. These are former graves. Next to every trace of excavation there are information boards with images of the found objects and basic information about the finds. One of the graves was also excavated at the top of a mound of similar formation. The photo shows stones located on its surface and practically on all sides. There are two lines of stones that rise from the base to the top, and a large stone in the middle and closer to the top. The measurements indicated the possibility that stones were placed on the mound, and that in this case they represent an important element of the funeral cult from the Early Iron Age, which has not yet been discovered in Slovenia so far.

Much more important for us was the recognition, that larger stones and more complex stone formations are arranged on this alleged mound in the way familiar to us from the already mentioned sites.



Former tomb at the top of the mound, excavated in the second half of the 19th century.

Measuring the relationships between them has shown us significant spatial and astronomical relations, so it is our opinion, that these are intentional layouts. In fact, some of the stones on the mound are also parts of tombs. At the recessed top, which has been excavated, three large unprocessed stones represent the walls of a former tomb. Because they were not originally on the surface, we did not include them in the measurements.



Two stones on the southern slope of the mound, between which is a gap aligned in a north-south direction (in the photo orientation to the south).

On top of that, we have found similar earth mounds (on which individual larger stones and formations are arranged in a meaningful spatial and astronomical matrix) at the extreme northern end of Slovenia. In contrast to *Vače*, the area of *Kozji vrh* (*Goat's Summit*) above the town of *Dravograd* in the *Upper Drava Valley* is completely

without official archeological finds and at significantly higher altitude, between 1200 and 1300 m.

CONCLUSION

In 2021, we conducted a total of 64 days of field research. One research day lasted 10 hours on average. We were not able to visit all the areas, which we had included in the plan. In our field research the measurements of five alleged megalithic monuments were also included, mainly in the perspective of potential astronomical orientations. Unexpected discoveries are a special story on their own.

New cases of rock art

We discovered interesting and intriguing unknown examples of rock art:

- (1) at least 10 petroglyphs, in some cases as decoration in standing stones;
- (2) a few stones with 'cup-marks';
- (3) possibly sculptured big stones;
- (4) potential traces of rock art in the ethnographic heritage in *Lož Valley*;
- (5) and probably the first example of rock art discovered in a cave with cultural layers from Lower Paleolithic.

Potential rock engravings were found in 10 locations in seven different geographical units: *Middle Drava Valley*; *Pohorje Mountain*; *Kozjak Mountain*; *Slovenian Hills*; *Macelj-Boč Highland* and *Western Haloze Hills*. Among them we highlight discoveries on two places, both with known archeological context. The first place is a karst cave in *Kozjak Mountain*, named *Herkove pečine* (*Herk's Cliff*), which is otherwise officially considered to be the only cave site from the Paleolithic in NE Slovenia. The second place with engravings is situated in *Zahodne Slovenske gorice* (*Western Slovenian Hills*) in the immediate vicinity of the multiperiod settlement *Plački vrh* (*Plač Summit*) whose origins date back to the Eneolithic period. The standing stone with engravings north under *Plač Summit* is astronomically related toward the earth tumulus from Middle Bronze Age, and so probably a part of prehistoric ritual landscape. Our assumption is, that both cases are most likely from the prehistoric period.

The authenticity of all the discovered rock engravings will have to be verified, as well as their approximate age. Therefore, we are counting on

the help of an acknowledged authority in the field of rock art, which unfortunately does not exist in Slovenia. With regard to engravings, we must also mention the potential traces of rock art in the ethnographic heritage of *Lož Valley* in *Notranjska Region*.

We also discovered at least ten cases of processed stone, which we consider important. At two locations we found a striking solitary rock with carved stairs, a phenomenon we had previously discovered in *Kozjak Mountain* and in *Western Haloze Hills*.

Furthermore, there are examples of monoliths in anthropomorphic and zoomorphic shapes. On *Donačka Mountain*, we discovered a stone in the shape of a reptile's head. Its counterpart, which we had known of for at least three years, is not far away. The snake head from *Western Haloze Hills* has similar dimensions. But it is distinguished from the stone from *Donačka Mountain* by the clear traces of processing and engravings. In previous years the rock formations resembling human heads were found mainly on *Pohorje Mountain*. This time, we found a huge stone and rock formation in the shape of a human head near the village of *Sv.Duh* on *Kozjak Mountain*. The head-shaped stone is one of the large stones right next to the *Church of the Holy Spirit*. These stones are considered sacred by the locals.

Additional interesting forms are the following: the rock formation with the trough in the upper surface; the big stone modeled in the form of an armchair; the so called stone twins, and stones in the shape of a three-sided pyramid, which we found in the area of villages *Šmartno* and *Bojtina* in *Pohorje Mountain*. These are all exceptional finds without a precedent.

Results of the archaeoastronomical measurements of the alleged megalithic monuments

An important breakthrough this year is the confirmation of preliminary measurements at the sites with alleged megalithic layouts that have been discovered in recent years. Accurate measurements of large stone formations were carried out at two locations on the *Eastern Pohorje Plateau*, and a site plan of the megalithic layout at

Fala Lake was prepared. The precise site plan of 53 stones around the *Fala Lake* unequivocally shows, that the individual elements of the layout are in the relationship of significant astronomical and spatial orientations. Obviously, important astronomical turning points played a key role in the layout. The measurements also indicated the possibility of using a single unit of measurement (approximately 0.83 meters, the so-called Megalithic Yard).

This confirmation of our preliminary assumptions about the layout gave us new insights into some other locations, where big stones are set in a similar matrix. There are at least 30 such locations in Slovenia. In 2021, we did research in five of them: *Plački vrh* (*Plač Summit*); *Donačka gora* (*Donačka Mountain*); *Boč* (*Boč Mountain*); *Sv.Areh na Pohorju* (*St.Henry on Pohorje Mountain*), *Pohorje* (*Pohorje Mountain*) and *Sv.Duh na Ostrem vrhu, Kozjak* (*St.Spirit on Sharp Summit, Kozjak Mountain*). In these cases, we defined some segments of the whole, but were unable to define the complete layouts, as in the case of *Fala Lake*. For the most part, this is due to the overgrown terrain and the fact that we must not interfere with the terrain.

An important insight into the stones and more complex structures in significant spatial and astronomical relationships was also gained by a visit to the famous archeological site near the village *Vače*. In the area of the main necropolis, a huge mound is well visible, it has large stones arranged over the surface in the manner described above. In this context, the installation should be understood as a part of a funeral cult, perhaps also as a tombstone. At the same time, this location reminded us of the already seen situation in 2018 in the area of *Kozji vrh* (*Goat's Summit*) with identical piles of stones on the surface.

Unexpected discoveries

Finally, in some locations, we came across traces that we had not expected and went beyond the scope of our research. At this point, it is certainly worth highlighting some areas on *Pohorje Mountain* with traces that testify to the existence of settlements; further, the hill in *Slovenske gorice* (*Slovenian Hills*), which was thoroughly transformed for unknown, supposedly cult reasons; land structures at the northern foot of *Maribor's Pohorje*, and the terraced terrain high on the *Snežnik Plateau* in the extent of more than 30 ha, to mention only the most important.

Conclusion

Considering the fact that we are researching the currently non-existent field of prehistoric stone art in Slovenia, we are satisfied with this year's discoveries.

Although we walked many miles and surveyed extensive areas, there are relatively few discoveries. The general impression could be that examples of stone art are rare in Slovenia.

Therefore, it should be pointed out that our research is conducted to a limited extent, which to a certain level affects the results. Firstly, our research activities are partly funded by membership fees, donations and gainful activities of the association (travel expenses, lunch). Secondly, our research activities are conducted entirely on a voluntary basis. Thirdly, we must not interfere with space in any way in our research, because we are not competent to do so. Fourth, our research is currently not supported by any public institution in Slovenia. The latter has certain consequences - lack of financial support, limited opportunities to present results, opposition from the professional public and absence from the field of professional discourse.

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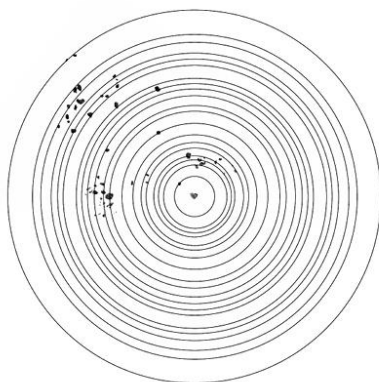
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