



The Vranica Mountain in Bosnia and Herzegovina: Living in a Sustainable Way

Ahmet Hadrovic

Faculty of Architecture, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

* Corresponding Author: **Ahmet Hadrovic**

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Abstract

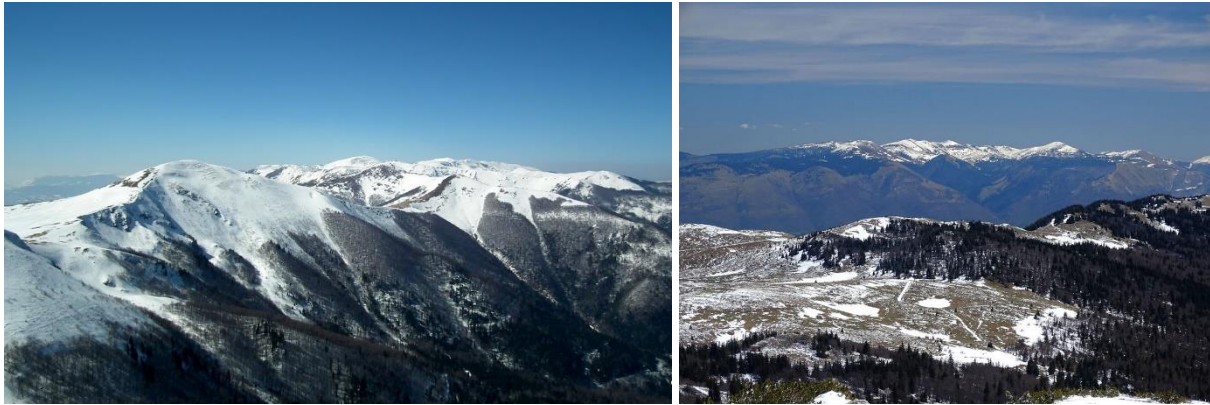
Vranica is a mountain range in the Dinaric Mountains in central Bosnia and Herzegovina, located between the Gornji Vakuf/Uskoplje town in the west and the Fojnica town in the east. The highest peak is Nadkrstac at 2110 meters above sea level. In terms of geology, the Vranica range is part of the Dinaric Alps and is formed mainly of secondary and tertiary sedimentary rocks, mainly limestone. Significant peaks are Nadkrstac (2110 meters above sea level), Locika (2106 meters), Rosinj (2059 meters) and Scit (1949 meters). Dense Pinus Mugo bushes replace mixed forests - mainly beech - above 1400 meters above sea level. The typical karst features of the nearby Herzegovinian mountains are relatively absent in Vranica, which has relatively abundant water sources. There are well-known sources of the rivers Dragaca in the east and Vrbas in the west. Vranica Mountain has generated a rich life from prehistoric times to the present day, both on the mountain itself and at its foot. It is the 'mother' of the largest cities located at its foot (Fojnica and Gornji Vakuf/Uskoplje) as well as a large number of villages.

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1. Introduction

Vranica is a mountain range in the Dinaric Mountains in central Bosnia and Herzegovina, located between the Gornji Vakuf/Uskoplje town in the west and the Fojnica town in the east. The highest peak is Nadkrstac at 2110 meters above sea level (Fig 1). In terms of geology, the Vranica range is part of the Dinaric Alps and is formed mainly of secondary and tertiary sedimentary rocks, mainly limestone. Significant peaks are Nadkrstac (2110 meters), Locika (2106 meters), Rosinj (2059 meters) and Scit (1949 meters). Dense Pinus Mugo bushes replace mixed forests - mainly beech - above 1400 meters above sea level. The typical karst features of the nearby Herzegovinian mountains are relatively absent in Vranica, which has relatively abundant water sources. There are well-known sources of the rivers Dragaca in the east and Vrbas in the west. Vranica mountain has generated a rich life from prehistoric times to the present day, both on the mountain itself and at its foot. It is the 'mother' of the largest cities located at its foot (Fojnica and Gornji Vakuf/Uskoplje) as well as a large number of villages. In this paper, the author deals with the topic of 'sustainability'. In this sense, he visited the entire area of Bosnia and Herzegovina and collected rich material, which he incorporated for the most part into his books and scientific works ^[1-28]. In this sense, the author visited the entire area of Bosnia and Herzegovina and collected rich material. Bosnia and Herzegovina is an extremely complex area in terms of the natural and social environment and its population. The three most numerous ethnic groups (Bosniaks, Serbs and Croats) live here, and thanks to its rich history, numerous people of different origins: Jews, Germans, Poles, Czechs, Italians, Hungarians... The composition of the population changed over time, but they remained material and spiritual traces of their life in Bosnia and Herzegovina. The complexity of Bosnia and Herzegovina is also visible in its architecture. Hence, for elaborating on the theme of sustainability, the most suitable scientific methodology ^[1] was used, which is covered in his book: Hadrovic, A. (2007). Defining Architectural Space on the Model of the Oriental Style CityHouse in Bosnia and Herzegovina, Serbia, Montenegro, Kosovo and Macedonia, Booksurge, LLC, North Charleston, SC, USA.



Source: <https://lh5.googleusercontent.com/p/AF1QipOygAdMF3d0b8U0w67c054uEarADDVlh2p1iIWk=h720>,

Accessed: May 16, 2025.

Source: https://41338573-213201863863258730.preview.editmysite.com/uploads/4/1/3/3/41338573/vranica-s-raduse_orig.jpg

Accessed: May 16, 2025.

Fig 1: Left: Aerial view of the Vranica Mountain. Right: View from the highest peak of the Radusa Mountain to the mountains and heights of the Vranica Group

2. Environment

By 'environment' we mean every possibility in the space in which man can realize his existence ^[1].

2.1. Natural environment

By 'natural environment' we mean all those features that nature gave, and on which man (mostly) did not exert his influence: geographical location, geomorphology, watercourses and reservoirs, plant and animal life, available soil, climate ^[1]. Vranica is the most famous mining mountain in Bosnia and Herzegovina, located between the towns of Gornji Vakuf/Uskoplje in the west and Fojnica in the east. It is in the geographical center of Bosnia and Herzegovina (Fig 2). It is located at the confluence of the Vrbas and Bosna rivers. Veliki Ivan-Bitovnja-Pogorelica-Zec-Vranica-Matorac-Scit, the whole series of these interconnected mountain massifs are considered geologically in the Central Bosnian schist mountains. Their direction of delivery is southeast-northwest starting from Tarčin, Bradina to Busovača and Gornji Vakuf/Uskoplje. All these mountains are lined up from a large new tunnel through Ivan-planina (3700 meters long), which connects Rastelica and Bradina

stations to the west: Veliki Ivan, Lisinj, Bitovnja, Pogorelica, Zec, then Vranica, Matorac and Scit. From all sides of these mountains, up to a height of 1000 meters, arable lands, arable fields, meadows and pastures line up. Above 1,000-1,600 meters above sea level, there are mostly coniferous forests and some coniferous forests. The forests in Scit mountain, in the forest area called Sebesic, are particularly beautiful and of excellent wood quality. Lush and tame pastures spread over all these mountains at a height of over 1,600 meters. All these mountains are full of springs with excellent drinking water up to the very tops (Figs 3,4). Streams abound in the lower regions. Veliki Ivan, Bitovnja and Zec mountains are watershed mountains. From their eastern, northern and northwestern sides, all springs, streams and rivers are tributaries of the Bosna river, which flows into the Sava. The springs, streams and rivers on the south and southwest sides of these mountains are tributaries of the Neretva river, which flows into the Adriatic Sea below Metkovic ^[29]. The highest peak of Vranica is Nadkrstac with 2112 meters above sea level, followed by Krstac with 2069 meters and Rosinj with 2059 meters above sea level. There are also somewhat lower peaks: Locika, Matorac, Sikira, Motika ^[30].



Source: https://sl.wikipedia.org/wiki/Zgodovina_Bosne_in_Hercegovine,

Accessed: May 16, 2025.

Fig 2: Location of Vranica in Bosnia and Herzegovina



Source: <https://balkans.aljazeera.net/blogs/2022/7/15/preporuka-za-planinarski-vikend-vranica-najljepša-planina-centralne-bosne>
Accessed: May 16, 2025.

Fig 3: Mountain Vranica. Due to the high altitude, from Locika you can see numerous mountains of a wider area, such as Prenj, Cvrnica, Radusa, Vlasic...



Source: <https://balkans.aljazeera.net/blogs/2022/7/15/preporuka-za-planinarski-vikend-vranica-najljepša-planina-centralne-bosne>

Accessed: June 9, 2025

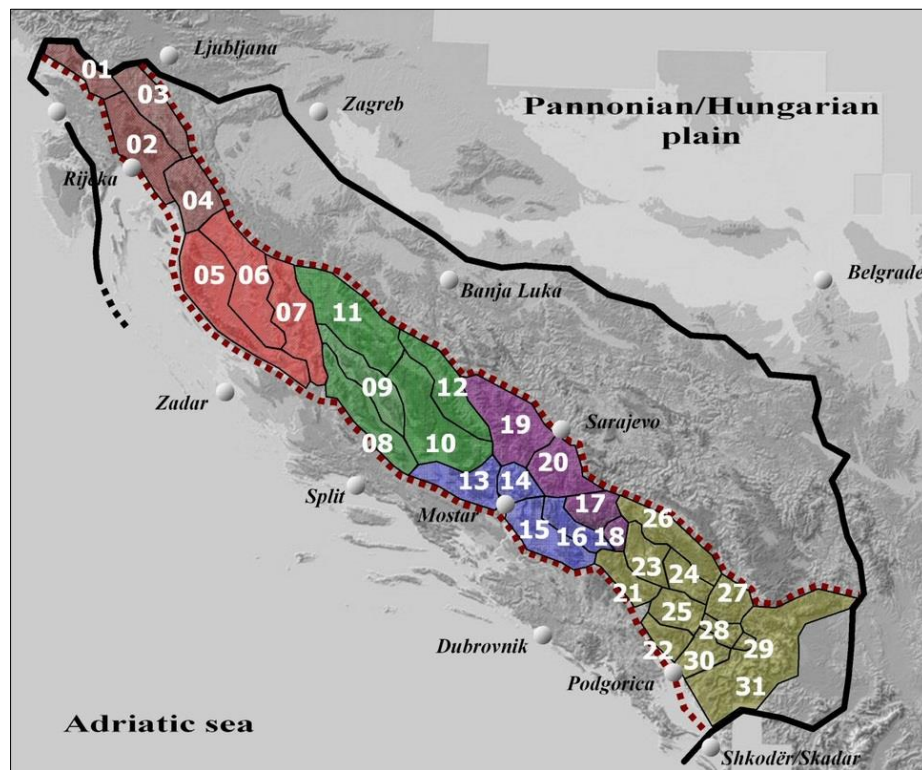
Source: <https://www.dinarskogorje.com/b51-grupa-vranice.html>,

Accessed: June 9, 2025

Fig 4: Vranica. A herd of sheep above the Prokosko lake

The mountains of the Vranica group are built of impermeable Paleozoic schists, and in some places there are clusters of magmatic eruptive rocks ('ore veins'). Igneous rocks are rich in different minerals - iron, copper, mercury, quartz, barite, which have been exploited throughout history (Fig 5). Throughout history, gold and other precious metals and minerals mines have been located in Vranica, but mining has been suspended in the last few decades. The geological structure of the entire Vranica mountain group is the result of a very long geological development, which resulted in the formation of very complex structural and lithostratigraphic relationships^[31]. From a geological point of view, this area belongs to the Bosnian schist mountains together with Ivan, Bitovnja, Zec, Matorec, and Scit. These mountains extend in a southeast-northwest direction. The highest mountains of the entire area form a unique morphological unit that arises from a unique geological base. All these mountains are in the lower - sloping parts, built of slate and rhyolite, in contrast to the highest parts, where limestone, dolomite and marble occur. Both silicate and carbonate rocks can be found in Vranica. Of the carbonate rocks, the most important are limestones, dolomites, and more rarely marbles of the Triassic or Paleozoic age in general. Limestones with transitions to dolomites are common. Cavity limestones are a further form of carbonate rocks on which calcomelanosols mainly develop. Among the representatives of carbonate substrates, it is important to point out the appearance of tertiary

sediments, namely pure or marls with alumina. Silicate rocks are represented by representatives of eruptive and crystalline slates. The most important of the eruptive rocks are quartz porphyries, which are mostly of Paleozoic age. The main outcrops of quartz porphyry form basins that have been dissected and disturbed by erosion. Mostly, the base mass contains crystals of quartz, feldspar, some muscovite, and in some varieties, biotite. Crystalline slates include gneisses, micaschists, phyllites and argilloles. Gneisses are represented in the area of Matorec and Sikira. Quartzites and quartz sandstones occupy mainly the ridges. The northern slopes of Vranica are built of acidic silicate rocks, where crystalline slate plays a dominant role. The mountains of the Vranica group have a different appearance, origin and morphology than the limestone mountains in Western Bosnia, on Bjelasnica and further south in Herzegovina. Vranica is the central mountain of that area. In addition to the highest peak, there are ten other mountain peaks over 1500 meters above sea level. We can also consider the side shoots of Vranica as separate mountains, but they all form a unique massif of the Central Bosnian Ore Mountains. Vranica lies on a volcanic belt; there is a long extinct volcano called Tethys^[32]. Unlike other high Dinaric mountains, glacial and karst landforms are less pronounced on Vranica and the surrounding mountains. From the karst forms, caves appear in places: Krupacka cave near Gornji Vakuf, cave on Krusicka mountain.



Source: https://www.dinarskogorje.com/uploads/4/1/3/3/41338573/1921566_26_orig.jpg,

Accessed: June 9, 2025

Fig 5: Central mountains of Bosnia and Herzegovina: 17. Zelengora Group, 18. Bioc-Maglic-Volujak Group, 19. Vranica Group, 20. Bjelasnica Group

Due to the characteristic geological structure and impermeable soil, numerous rivers and streams flow from the mountains in this group in all directions. From a hydrological point of view, the Vranica mountain is extremely rich in surface water, and there are numerous springs high up in the mountain (Figs 6-19). The Jezernica stream emerges from the Prokosko lake, which, receiving in its course several other smaller streams together, gives the Fojnička river, which flows through Fojnica. The Fojnička river carries insignificant amounts of golden sand in its upper reaches. To the south, below the slopes of Luka (1,950 meters above sea level) in Vranica, there are the sources of the Vrbas river, which from its source gradually falls in a western direction towards Dobruska mountain and Crni Vrh, then descends in a northwesterly direction to the lower areas of Skoplje Polje. On the southern side, below the peaks of Zec mountain, there are the sources of the river Neretva, which continues to make its way through large ravines and deep ravines, until it finally descends near the village of Podhuma into the plain, from where it flows calmly all the way to its confluence with the Neretva near Ostrozac. From the north-eastern side of the Pogorelica mountain, below Ljeskovik, springs the Zeljeznica stream (the people call it Gvozdjanska river). The stream flows through the Dusina village, below which it receives the Brloznjak stream. The railway goes further

through mountain ravines and gorges, until it breaks out into the plain near the Gojevici village. It flows further through the Bakovic village (an old mining place, where pyrite mines are still found today) ^[29]. Here it receives the Bistrica stream, which springs from below Radovan. Then it flows in a northerly direction as an already quite strong river towards Fojnica, where 2 km before Fojnica itself, near the Alaupovic bridge, it flows into the Fojnica river. Countless smaller springs with good drinking water can be found on all sides of this great mountain range. The waters of these springs contain very little lime, which is why they are light and soft. All the villages and towns that lie below these mountains have good drinking water. At the foot of these mountains, healing mineral waters also spring up, as in the towns of Fojnica and Kiseljak. The Kiseljak spring is widely known with its carbonic-acid healing water against gall and kidney diseases. In Fojnica, there are several healing hot springs (with water at a temperature of 28 °C) that also contain some radium. These springs (once privately owned by the Husbasa and Memija families) were caught and their water was brought to the bathing spa and the hotel „Reumal“. In addition to these healing springs, there are a large number of healing springs along the road from Kiseljak to Busovaca and Travnik. Among these springs, there is a strong spring in Klokoti near Brestovsko (about 12 km from Kiseljak).



Source: https://www.youtube.com/watch?v=_o72SKojjI0,

Accessed: June 9, 2025

Source: https://lh5.googleusercontent.com/p/AF1QipO5QMY_SvMuvr3wAQPgZn2_z59oY3L2hwYCHteu=w408-h544-k-no

Accessed: June 9, 2025

Fig 6: Source of Neretvica on Vitreusa, Vranica group (geographical coordinates: 43°52'34.82"N, 17°49'38.35"E, altitude 1547 m)



Source: https://lh5.googleusercontent.com/p/AF1QipO9BrF3JgQiS9CCKe7KzSi4S-XnPwNG6zoK_t9B=h720,

Accessed: June 9, 2025

Source: <https://lh5.googleusercontent.com/p/AF1QipOTgvAuwwqWLD28i4tvaWWnMTqCTULJrTaYU4w0n=h720>

Accessed: June 9, 2025

Fig 7: Left: Vrljicko source (geographic coordinates: 43°56'44.16"N, 17°42'42.72"E, altitude 1639 m). Right: Zlatni potok (Gold stream) in Vranica (geographic coordinates: 43°58'17.49"N, 17°43'54.91"E, altitude 1534 m)

When we talk about hydrology, several important rivers rise in Vranica, such as Vrbas, or Ragalska river and Zeljeznica, which later create the Fojnica river near Fojnica, and on the other side there are numerous tributaries of the Neretvica (Figs 8-11). The big problem of these rivers is the construction of small hydroelectric power plants, which threaten their disappearance, and the underground water system has already been disrupted, so many sources have disappeared or their capacity has decreased. There are many beautiful waterfalls on numerous streams, such as the waterfall on the Kozicka river or the Zdrimacki waterfall, while on the Gornjo Vakufska/Uskopaljska side is the Strapala waterfall. There are also several lakes, the most famous of which is Prokosko. Prokosko lake is 6 km from the home on Rosinje. There are also hot mineral springs, such as the one in Fojnica. The largest river that rises on the Vranica

mountain and flows westward is the Vrbas, whose source is under Zec-planina^[33] and Vitreusa at about 1,600 meters above sea level. To the west also flows the river Bistrica (towards Gornji Vakuf/Uskoplje) and several streams. To the north flows the Kruscica. Ivancica (towards Busovaca), Kozica river (towards Kacuni), Jezernica, Fojnica river (towards Kiseljak), which has a tributary Zeljeznica (flows through Dusina and Bakovici), flow to the east. The Kresevska river flows from the Inča and Lopata mountains. Crna river flows from Bitovnja to the east, which after joining Bijela river becomes Lepenica. Streams flow from the south of Bitovnja and merge into Tresanica, a tributary of the Neretva near Konjic, and in the south of Bitovnja is the spring of Neretvica. On Vranica you can see waterfalls (Zdrimac waterfall, Kozicki waterfall) and many different caves and pits.



Source: https://www.mtb.ba/wp-content/uploads/2019/06/DSC_9472.jpg,

Accessed: June 10, 2025

Source: https://www.youtube.com/watch?v=E_t24OwaPpo,

Accessed: June 10, 2025

Fig 8: Left: The source of the Vrbas river at the foot of the Zec mountain (geographical coordinates: 43°54'47.27"N, 17°49'37.69"E, altitude 1714 m). Right: Bistrica river near Gornji Vakuf/Uskoplje



Source: <https://lh5.googleusercontent.com/p/AF1QipMUMYQ4xXTf4l2U2LzkqYSNMA5SUi1p9jdH3j=h720> **Accessed:** June 10, 2025

Fig 9: The Kruscica river at the foot of the Vranica mountain (near Gornji Vakuf/Uskoplje)



Source: <https://grad-busovaca.com/kontrasti-duz-korita-rijeke-ivancice-u-busovaci/>,

Accessed: June 10, 2025

Fig 10: Ivancica river near Busovaca



Source: <https://www.bistrobih.ba/nova/rijeka-fojnica/>, Accessed: June 10, 2025

Fig 11: Fojnica river

In the northeastern part of Vranica, in a wide basin surrounded on one side by high peaks, lies Prokosko lake (geographical coordinates: 43°57'26.51"N, 17°45'16.28"E, altitude 1636 m). It is one of the largest and most beautiful lakes in the mountains of Bosnia and Herzegovina. It is of glacial origin. It is oval in shape, 430 m long, 190 m wide, and its greatest depth is about 13 m. It is stocked with rainbow trout. A water lizard (*Triton alpestris*) lives in the lake - an endemic amphibian. Mountain orchid (*Orchis bosniaca*) grows around the lake. And the wild duck (*Anas bosha*) occasionally resides in the marsh vegetation - sedges. The lake has been declared a natural monument and is one of the most endangered mountain lakes in Bosnia and Herzegovina. Negative physical-geographical processes and a large number of livestock huts and cottages built in the last decade

on the south-western lake catchment side (the richest in tributary waters) have contributed to the creation of a larger system of swamp and marsh vegetation. One third of the lake is already swamped, and if protection measures are not taken in due time, the lake is threatened with disappearance. In 2005, Prokosko lake received a protected status according to IUCN criteria, when the BiH authorities declared it a natural monument ^[34]. Despite these protective measures, it is not clear whether the pollution associated with excessive recreation will become completely fatal for the salamander. On the shore of the southeastern side of the lake, surrounded by a rare forest of spruce and juniper pine, a mountain lodge is being renovated on the foundations of an old lodge that burned down in a fire in 1983 (Fig 13).



Source: <https://www.facebook.com/groups/izvorivranice/posts/sikirsko-vrelo-vranica/6338232879529101/>, Accessed: June 10, 2025

Source: <https://lh5.googleusercontent.com/p/AF1QipOaOFEYwLHLmjdYmnWuSzzZpE3c1ksCqWYn mJC=w720-h720-pd>, Accessed: June 10, 2025

Fig 12: Sikirski stream on Vranica mountain (geographical coordinates: 43°55'49.59"N, 17°47'54.37"E, altitude 1661 m)



Source: Author (November 7, 2015.)

Fig 13: Prokosko lake (Prokosko jezero)

Near the Zdrimci village, 4 km from the center of Gornji Vakuf/Uskoplje, in an undulating valley at 738 meters above sea level, lie three lakes - 'mountain eyes': Hadzino, Pijavicko and Pasje jezero (geographical coordinates: 43°55'21.99"N, 17°37'20.65 "E". Hadzino lake (also called Adzino or

Hadzica) is the most beautiful and the largest in terms of surface area^[35]. It is circular in shape, about 120 meters long and about 100 meters wide, and its greatest depth is about 20 meters. The lakes are about 250 m apart (Figs 14, 15).



Source: <https://www.youtube.com/watch?v=4hSEliaxgcs>,
Accessed: June 10, 2025

Fig 14: Hadzino (Zdimicko) lake near Gornji Vakuf



Source: <https://www.cabidigitallibrary.org/doi/pdf/10.5555/20183030752>,
Accessed: June 10, 2025

Fig 15: Left: Pijavicko lake near Gornji Vakuf. Right: Pasije lake near Gornji Vakuf



Source: https://lh5.googleusercontent.com/p/AF1QipNn-LcjEsXeEUjX-akwZJEKHPGZn_6mq4jwxQoW=h720
Accessed: June 10, 2025
Source: <https://lh5.googleusercontent.com/p/AF1QipNnAqCz9cdCBgjSmkClxRCqPUiGJwpmbSilQv=h720>,
Accessed: June 10, 2025

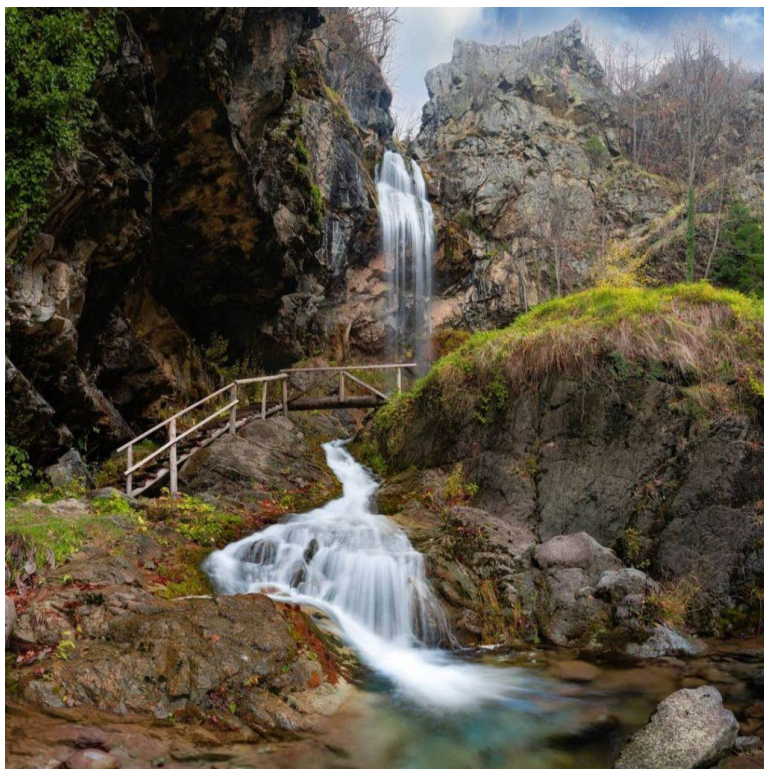
Fig 16: Left: Small lake at Vranica (geographical coordinates: 43°56'58.24"N, 17°42'09.00"E, altitude 1863 m). Right: Gunjaca lake on Vitreusa (geographical coordinates: 43°52'19.05"N, 17°48'31.74"E, altitude 1762)

A few hundred meters above the village of Zdrimci there is an attractive waterfall, Zdrimacki slap (Dzrimac's waterfall), about 30 meters high (geographical coordinates: 43°55'24.08"N, 17°39'11.70"E, altitude 984). It is also known as the Crndol waterfall after the river of the same name (stream) Crndol, which is fed mostly by water from the Vrljicko spring, and descends down the steep slopes of Radovina to form a beautiful almost 30-meter-high waterfall three kilometers before it flows into the Vrbas river. Part of

the stream sinks near Pasije jezera. Practically, there are 3 breaks (two cascades), but depending on the flow/amount of water, there are sometimes two or one break. At the foot of the waterfall, which is in the form of a small amphitheater, there is a small lake, which the water hollowed out due to erosion. Although it does not have a large flow of water, the waterfall is characterized by exceptional beauty, especially in the spring after the snow has melted, but also in late autumn. The stream bed is steep and narrow, so the roar of the water

is very loud. In cold winters with great minuses, it is not uncommon for it to freeze. A well-maintained narrow path leads to the foothills, with a built-in wooden staircase and an access bridge. Only the bravest can conquer the top of the

waterfall because the path is very steep and narrow, high, slippery, dangerous and there is no protective fence... In the immediate vicinity there is also a fountain and a barbecue that was built at the end of the summer of 2014 ^[35] (Fig 17).



Source: <https://ill.ba/zdrmaca-waterfall/>,

Accessed: June 10, 2025

Source: <https://putovanjazapet.com/slapovi-kozice-skriveni-sumski-raj/>,

Accessed: June 10, 2025

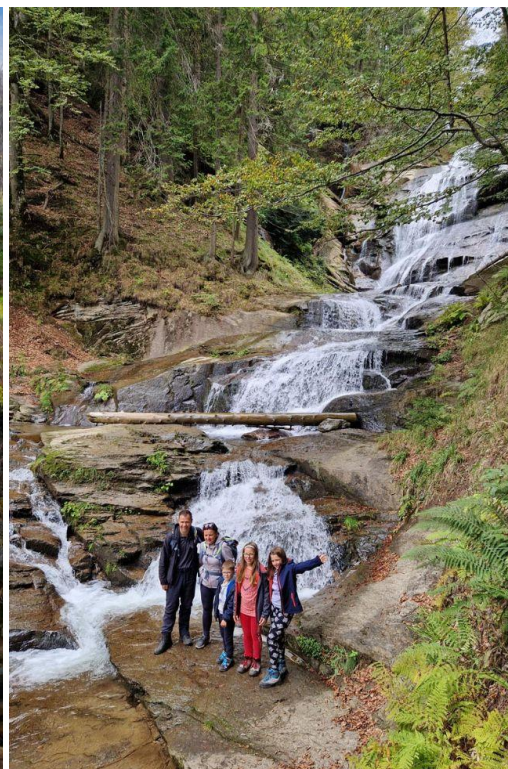


Fig 17: Left: Zdrmac's waterfall on the Vranica mountain. Right: Waterfalls on the Kozica river near Fojnica (geographic coordinates: 44°00'58.47"N, 17°51'12.55"E, altitude 988)

In terms of flora, the lakes are inhabited by almost the same herbaceous and woody species. The group of hydrophytes is dominated by reed (*Phragmites australis* Cav.), and there are also species from the genus *Carex* and cattail (*Petasites hybridus* L.). Water mint (*Mentha aquatica* L.) and hops (*Humulus lupulus* L.) can also be found on the banks of Pijavički, and marsh or yellow iris (*Iris pseudacorus* L.) on Pasije. Black alder (*Alnus glutinosa* L.), white and brittle willows (*Salix alba* L. and *Salix fragilis* L.) and yew (*Salix cinerea* L.) are present on the banks. On the north-eastern side of the shore of Hadzic lake, a stand of black alder trees was formed along with individual specimens of white willow. Around Pijavicko Lake, thickets and thickets of white willow and black alder develop. About ten meters away, there are pomegranate (*Rosa canina* L.), hazel (*Hedera helix* L.); blackberry (*Rubus fruticosus* L.) hazel (*Corylus avellana* L.); linden (*Tilia cordata* Mill.), milk maple (*Acer platanoides* L.), white willow (*Salix alba* L.), brittle willow (*Salix fragilis* L.), white ash (*Fraxinus excelsior* L.), hornbeam (*Carpinus betulus* L.), sycamore (*Quercus petraea* Liebl.), beech (*Fagus sylvatica* L.)... The wider area of the waterfall belongs to oak and beech forests. The vegetation on the rocks and stones at the foot of the waterfall, overgrown with water algae and mosses, is particularly interesting. Brook trout (*Salmo trutta m. fario* L.) is present in Crndol ^[35].



Source: <https://bracobabic.com/2021/01/29/planinska-grupa-vranica-planinarska-karta/#jp-carousel-4811>,

Accessed: June 10, 2025

Fig 18: Lake near the Gvozdjan stables (1680 meters above sea level) on Zec Mountain

There are a large number of puddles in Vranica that never dry up: on Kol under Locika, on Dobruska Vranica under Kukuruzevlje and in Siroki do under Nadkrstec (Fig 19).



Source: <https://bracobabic.com/2021/01/29/planinska-grupa-vranica-planinarska-karta/#jp-carousel-5011>,

Accessed: June 10, 2025

Fig 19: At the foot of the Sarajevska vrata (Sarajevo's gate) pass, there are several puddles at 1,850 meters above sea level

We cannot say that the climate in Vranica is very harsh, but the vegetation at higher altitudes, where the influence of the Mediterranean is not felt, is adapted to a short vegetation period of 120 days. Moderately low temperatures prevail on the Vranica mountain, with extreme minimums reaching -20°C , and summers are very hot only on the southern and western slopes due to the influence of the sub-Mediterranean. Due to the collision of two climates, sub-Mediterranean from the Neretva valley and continental, the mountain is abundant with precipitation. In winter, the mountain is covered with snow, which is often up to two meters high, so two ski resorts, Brusnica and Vran kamen, are open. There are no meteorological stations in the mountainous area of central Bosnia, so it is not possible to draw conclusions about the climatic conditions without exact indicators. Winters are known to last long in this mountainous area. Already in autumn, the snow whitens the high peaks. Summers are cool and short; sunny periods are often interrupted by sudden showers of rain and thunder on the heights, sometimes stormy with hail. The climate in these mountain areas is similar to the other Dinaric mountains.

The flora of the Vranica mountain group has specific biogeographic characteristics. On their slopes, and especially on the slopes and heights of the Vranica mountain, there are large meadows, full of fragrant daffodils and other various mountain plants and flowers in the summer. On Vranica, below the peak of Krstac, you can find a very rare plant called *Rhododendron ferrugineum* (*Alpenrose*, *Almrausch*). These are low bushes with red flowers, blooming at the end of July^[29]. In this area we find many interesting alpine and other types of vegetation, otherwise rarely distributed in our mountains: mountain orchid (*Orchis bosniaca*), alpine rose (*Rhododendron hirsutum* L.), alder (*Alnus viridis*), mahinica (*Empetrum hermaphroditum* (L) Hag), star (*Aster alpinus*), mountain (*Arnica montana*), sedum (*Jasione montana*), widow (*Scabiosa silenifolia*) and others. An endemic species

also grows there: white bellflower (*Edraianthus niveus*). However, this mountainous region is best known for its medicinal forest fruits: blueberries (*Vaccinium myrtillus*) and cranberries (*Vaccinium vitis idea* L.). On the Vranica mountain you can find endemic plants: Vranica bellflower (white Vranica bellflower), Bosnian bluebell and Vranica vrkuta. Vranica, due to its natural advantages, is a true botanical paradise, and rich and varied flora grows and lives on its slopes. Dense forests of beech, fir and spruce predominate in the lower areas, while the higher peaks are home to juniper and dwarf conifer. Vranica is also known for its large number of blueberries, so during the harvest time, many pickers of this fruit can be found on this mountain, just like cranberries and Icelandic lichen. By the way, it is the most famous ore mountain in our country, since the Roman period. Botanical researches in Vranica were numerous, with numerous data on the flora. It must be noted right away that the basic forest tree species are fir, spruce and beech. In the moist habitats of the mountain, we find green alder, which is very rare for our circumstances. Vranica is also known for its belts of blueberries, so during the harvest time, many pickers of this forest fruit can be found on this mountain. Botanical researches on Vranica were numerous, with rich data on the flora. The main forest tree species are fir, sycamore and beech. In the moist habitats of the mountain we find, for our circumstances, a very rare green alder. White willows, black alder, gray alder and white ash are present at lower altitudes. On the warm slopes that gravitate to the Neretva, we find cer, medunac oak, black hornbeam, hornbeam, black ash, chub and numerous other thermophilic species.

The fauna of this region is very rich in high and low game, which is favored by its wooded slopes, as well as various types of birds, reptiles and insects. Hunting for roe deer, chamois, and grouse has been a tradition since ancient times and has remained so until today. Game animals include: bear, wolf, fox, badger, marten, wild boar, chamois, roe deer, rabbit, squirrel, grouse, gray eagle, hawk, falcon (Fig 20). Vranica has always been known for hunting. The living conditions on this mountain are very good for all kinds of autochthonous game, especially for the brown bear and roe deer. Hunting for roe deer and chamois in the Vranica mountain is particularly interesting. In the springtime during the mating season, many hunters go to these mountains (Scit, for example) to hunt grouse. Wild boar live in packs in deep streams and in mountain meadows. They leave tracks by burrowing in the ground and looking for roots and herbs when acorns and other food are gone. There are also a lot of wolves there, which cause a lot of damage to the highlanders, in the summer in the mountains where the cattle are grazing, and in the winter they come down to the villages and hide in the village corrals and barns. Bears are rarer in these mountainous regions^[29].



Source: <https://artinfo.ba/index.php/zanimljivosti/11854-fantasticno-kamera-zabiljezila-veliki-broj-medvjeda-na-vranici>

Accessed: June 10, 2025

Fig 20: Bears and roe deer on Vranica

Vranica mountain has always been famous for hunting. After the war (1992-1995), the condition of wild game was very bad, but it has recently improved. The living conditions on this mountain are very good for all kinds of autochthonous game, especially for the brown bear and roe deer. Thus, in addition to the protected hairy game, we also find a large population of deaf grouse. Among unprotected furry game we find foxes, golden martens, white martens, squirrels and plovers. Among the animals in this area, we meet the wolf, and recently the presence of individual lynx specimens has been registered. In the 1970s, chamois were introduced, which adapted well to the habitat, but during the last war and

the post-war period, they were all exterminated. The lush and high-quality pastures that cover the entire area of the Vranica mountain group are conducive to the development of livestock farming, which has a long tradition here. The pastures extend to the highest peaks (Fig 21). There used to be numerous seasonal herders' settlements from the areas of Busovaca, Fojnica, Kiseljak, Bugojno and Gornji Vakuf. This branch of the economy is in significant decline and today it is mainly engaged in by locals from the villages at the foot of the mountain who usually leave with their herds at the end of spring and stay until October.



Source: <https://gornjivakuf.com/2023/07/09/foto-vikend-na-planini-vranici-kod-gornjeg-vakufa-uskoplja/>

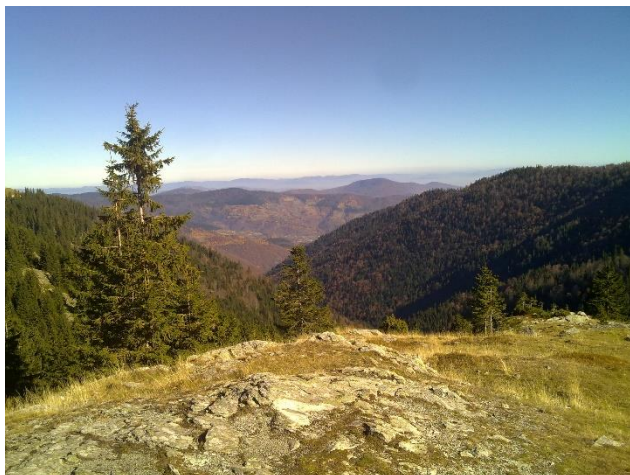
Accessed: June 10, 2025

Fig 21: Pastures on Vranica

Unlike animal husbandry, forestry as a branch of the economy is constantly growing (Fig 22). The specificity of Vranica and the surrounding foothills is the absence of bare mountains - the area is overgrown with vegetation up to the highest peaks. The forest cover is dominated by mixed forests of beech, fir and spruce. Particularly high-quality coniferous

forests are located in the area of Scit and Sebesic. Spruce stands occur in special subalpine communities and form a special height zone, but also among beech and fir stands. Beech forests are located quite low and are the most abundant. The pine tree is found at higher altitudes, and it also descends to the Prokosko lake, while on the pastures, where

the juniper has been suppressed, the well-known blueberry and cranberry appear. The northeastern high altitudes and slopes of Vranica are mostly thickets of partridge and green alder, where avalanches occur regularly. The reduction of areas under forests is one of the biggest environmental problems, both locally and globally, and leads to climate change, ecosystem change, and soil destruction that precedes erosion. For this reason, forest administrations and farms in Bosnia and Herzegovina are obliged to introduce the so-called 'forestry order' and bans on 'bare felling' of forests, and after exploitation, afforestation of the land.



Source: Author (November 7, 2015.)

Source: <https://www.youtube.com/watch?v=RIWiX8DJ8us>,

Accessed: June 10, 2025

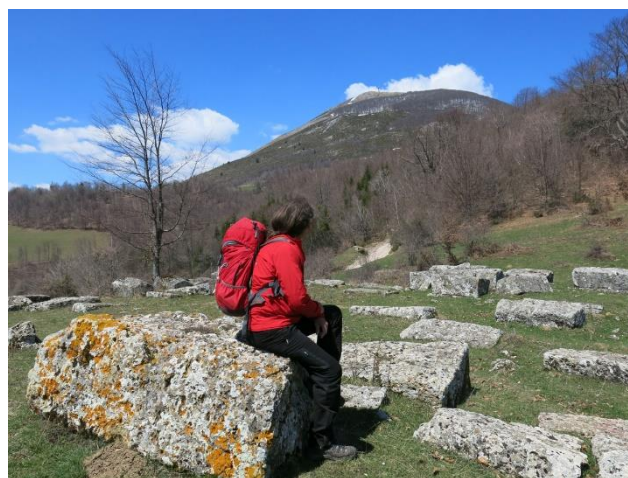
Fig 22: Forests on Vranica

Unlike other high Bosnian mountains, Vranica is quite a tame mountain, which can be approached from all sides. This is the reason why cattle are still intensively grazed on this mountain, and there are numerous seasonal dwellings next to pastures and streams, and excellent 'Vranica cheese' is also produced.

2.2. Social environment

By 'social environment' we mean everything that man has created and that separates him from the world of other living beings ^[1]. It includes both physical structures (various material, more or less ordered products of their activities) and the immaterial world that we know with the intellect (science, philosophy, religion, law, morality) through an ordered system of abstract symbols (letters, signs) ^[1]. The medieval stećak necropolises are traces of people's lives on the Vranica mountain (Fig 23). In the first half of the 15th century, Dubrovnik merchants and artisans in the community with miners, the former village of Fojnica, in the place of Pazarnica, put their stamp on the original town, which

became a center, a market place for the exchange of goods. The oldest Ostruznica mine with the opening of new mining districts around Fojnica (Trosnik, Pijukovac, Bistrica, Rupnovac, Pavlovac, Lagumi, Cemernica) made it possible to create a strong Dubrovnik trade colony in Fojnica itself at the aforementioned place Pazarnica. In 1469, Fojnica was entered in the register of the Bosnian sandjaks as the nahija of Hvojnica. It mentions the square of the same name and the Iron Maidan with the monastery. Southwest of the town of Fojnica, on the slopes of Vrhovo, an integral part of Matorec, is the old mining and blacksmith settlement Tjesilo. The immediate surroundings of Tješil are known for numerous traces of mining activity (in the Ravanac forest there are piles of coated stone that the water carried, with significant traces of red color, iron oxide).



Source: <https://bracobabic.com/2021/01/29/planinska-grupa-vranica-planinarska-karta/#jp-carousel-4841>,

Accessed: June 10, 2025

Source: <https://bracobabic.com/2021/09/11/planinska-grupa-vranica-kronologija-povijesnih-dogadaja/#jp-carousel-9337>

Accessed: June 10, 2025

Fig 23: The highest peak of the mountain Bitovnja – Lisin (1742 meters above sea level) and the view from the necropolis with stecci on Velika (1141 meters above sea level)

In folklore, it is often mentioned that Vranica is a gold-bearing mountain, Vrbas is a gold-bearing river, and Bistrica is called a gold-bearing stream, where mining activities began already during the prehistoric and Illyrian periods (Fig 24). The Vranica mountain is certainly the most famous ore mountain in Bosnia and Herzegovina. This is confirmed by the fact that this region is criss-crossed by old Roman,

livestock and caravan routes. In the dense network of Roman roads in the territory of Bosnia and Herzegovina, there were a certain number of them, which were mining in function. They got that name because they were built with the aim of connecting the existing mines in the interior of the province of Dalmatia with the provincial center in Salona as well as with other important cities outside Dalmatia, for example with Sirmi and Sosci. These are, first of all, main roads, but in addition to them there were a certain number of those that had the characteristics of local or vicinal roads ^[36]. After the Great Uprising was suppressed (from the 6th to the 9th AD), the Romans built the basic routes of the road network in the interior of Illyricum. Some roads were built in the time of Augustus, in those parts that were occupied earlier, around Narona, Salona and Iadaro, and in Lika and around Burnum. In the time of Augustus, the construction of the Narona-Nevesinjsko polje-Borci-Konjic-Sarajevsko polje road began, as evidenced by the landmark in the Tresanica valley near Konjic. That landmark with the inscription 'Divo Augusto' is the oldest epigraphic evidence of the construction of Roman roads in Dalmatia ^[37]. The central Bosnian ore-bearing area included the area of Bugojno, Gornji Vakuf, Kresevo, Kiseljak, Fojnica, Travnik, the Lasva, Vares and Breza valleys, while the eastern Bosnian ore-bearing area included rich silver-bearing mines that were mostly located around today's Srebrenica ^[36]. An important mining and trade route from Fojnica led through the valley of the Dusinsko potok, then via Dusina and Rasvar it emerged on the Kolijevrat plateau, and then along the slopes of Scavnica, Visnjevica Gornja, Senica, Sultic and Trusina, that is, through the Neretvica valley, it joined the Neretljan highway. Traces of this road have been preserved in several places, for example in the cuts above Sultic and on Brezovica, or in the area of Kolijevrat, in a length of 50 m, in the form of an embankment, that is, a planum, 3 m wide and 1 m high ^[36]. The second road from Kresevo led through the valley between the mountains of Volujak and Tmor and emerged near present-day Tarcin, where it joined the Narona-Argentaria highway ^[36]. Considering the exceptional geographical position, and the fact that the famous gold-bearing mines in the province of Dalmatia were located in the Kiseljak region, or more precisely in the area of today's Gromiljak, the administrative center of the Kresevo-Fojnica-Kiseljak mining district, which is usually identified with by the Stanekli road station, which is mentioned by the Tabula Peutingeriana on the Salona-Argentaria highway ^[36]. One of the two Roman roads went from Gornji Vakuf through Bistrica Rika, Zagrlje, Opara, Duboko and all the way to Veceriska (Vitez). The toponyms Zlatno guvno, Crvene zemlje or the hydronym Zlatni potok also support the aforementioned claims (mining). That this area is rich in gold is confirmed by numerous historical documents and relevant literature. The oldest reliable written traces date from the famous Pliny the Elder and his work *Naturalis historia* ^[38] where he mentions that gold can be found in the area corresponding to today's Gornji Vakuf. The famous French engineer Albert Bordeaux writes in his travel book *Popular landscapes of Bosnia*: „Passing through the valley of Gornji Vakuf towards the Bistrica village, along the way you come across huge piles of stones that have been washed away by the water, and are the result of the washing of gold in Bistrica and Vrbas, in Crnodol and Suhodol“ ^[39]. The production of gold in the Middle Ages in Bosnia cannot be compared with Roman times, when the production was significantly higher.

Washing was also done by Saxon miners who were invited from Erdelj and Banat to Bosnia during the 13th century. They re-washed those parts of the deposit that were considered unworkable during gold production during Roman rule. This was the case with gold leaching in Vranica and along the Bistrica, Krupa and Vrbas rivers ^[40].



Source: <https://gornjivakuf.com/2017/08/24/foto-rudnici-zlata-ili-pecine-u-bistickoj-rici/>,

Accessed: June 10, 2025

Fig 24: Gold Mine – Cave in the Bistrica river near Gornji Vakuf/Uskoplje

Today, there is renewed interest in gold panning in the Bistrica river near Gornji Vakuf/Uskoplje (Fig 25). No information is available on the success achieved.



Source: <https://www.youtube.com/watch?v=7rUUHiYv8W4>,

Accessed: June 10, 2025

Fig 25: A modern machine ('jaruzalo') for washing gold in the Bistrica River near Gornji Vakuf/Uskoplje

Vranica mountain is a huge natural resource that has generated life from prehistoric times to the present day. The life of people throughout all that time remained recorded in the built cities and villages and many individual examples of traces of life, which we read as cultural and historical heritage. Fojnica became part of the Roman Empire at the end of the 1st century AD, when Bosnia and Herzegovina as a whole. Fojnica attracted the ancient Romans with its mineral wealth and abundant deposits of thermal and mineral water. The development of mining in the Fojnica region (especially the production of gold and silver) initiated the creation and development of cities. Fojnica developed intensively as a town settlement in the thirties of the 15th century, when a 'colony'-settlement of Dubrovnik people was created there, the most developed in all of Bosnia. At the same time, Fojnica became the place where Bosnian rulers minted money, and until the arrival of the Ottomans, it was considered the most developed settlement in Bosnia. We learn from later Ottoman sources that in Fojnica (in addition to silver and gold processing) other trades were developed: tailoring, baking,

shoemaking, butchery, tanning, furrier... Fojnica was an open-type settlement with a square as its core ^[41]. Bosnian Queen Katarina sought refuge from the Ottomans in Kozograd, then the royal summer residence in the mountains near Fojnica, before heading to Rome. The most important resources of the social environment in Fojnica are: the medieval fortress-cities of Kozograd and Kastela, the Franciscan monastery, Hadrovic's mosque, Musafirhana, an autochthonous-folk Bosnian house ^[42], the Charter of Sultan Mehmed El Fatih (May 28, 1463, Milodrazje), tekke in Vukeljici, three turbets next to the tekke in Vukeljici, tekke in Zivcici, tekke in Oglavak, section for charcoal production ^[43].

Zvonigrad is a fortified prehistoric settlement on a peak above Otigosce, slightly north of Bozici near Fojnica (at 1064 meters above sea level). The Zeljeznica river flows to the west. The function of this settlement was probably to guard the mines along the river Zeljeznica. Archaeological investigations of this locality established that there was a prehistoric castle-type settlement in Zvonigrad and that artificial terraces, traces of settlements and walls without lime can still be recognized, while fragments of prehistoric ceramics are scattered throughout the castle.

Kozograd (Kozovgrad) is a fortress near Fojnica (Fig 26). One of the foundations of the history of Bosnia, its statehood, integrity and rich culture. The exact time of construction is not known. It is reliably known that it was the summer residence of the Bosnian kings and the last refuge of the Bosnian Queen Katarina (1424-1478). It is located on the slopes of Zec mountain, at 1430 meters above sea level. It was first mentioned in historical sources in 1434. In case of danger, the people of Dubrovnik from Fojnica took refuge here with their valuables. It was the summer residence and town of the kings of the medieval Bosnian state. Today, it is ecologically endangered because the RTV transmitter is located in the middle of Kozograd.



Source: https://radiosarajevo.ba/metromahala teme/kozograd-kod-fojnice-unisteno-posljednje-prebivaliste-bosanske-kraljice-katarine/368858#google_vignette, Accessed: June 10, 2025

Fig 26: The remains of the walls of the medieval Kozograd city-fortress

Fifteen kilometers from the center of Fojnica, on the slopes of Zahor mountain, is the medieval town of Kastel ('Kastela'). The building structure is located above the Rizvici village, at the triple border of the municipalities of Fojnica, Kiseljak and Busovaca. It dates from the Middle Ages, from the time of

the Bosnian state. The building is a kind of monastery, and it served as a prayer and church school space. It was built on a rock, in a very inaccessible place. When the Franciscans came to Fojnica, they built a building there in order to dedicate themselves to God in a special way in prayer and to educate their brothers. The castle served as a shelter from the enemy. During the conquest of the medieval Bosnian kingdom from the Ottoman Empire, the Franciscans led by Friar Andjelo Zvizdovic (c. 1420-1498) took refuge in the Old Town of Kastela, who descended from there to the field in the village of Milodrazje, where Sultan Mehmed II El Fatih (1432-1481), on May 28, 1463, handed him Ahdnamu, the oldest human rights document. In relation to other fortified cities of medieval Bosnia. The area on which the City was built in its original state was a hollowed-out cave in the rock, which was expanded and walled off by later activities. In this way, two towers were built in the shape of a rectangle - the White and the Black City. The old town of Kastela is three larger caves located deep in the rocky part of Zahor. The openings of the caves are larger, so 40 to 50 people can fit in one opening. Today it is a ruin, but the walls have been preserved. A rich spring springs up above this rock complex. The people call this spring water „the water of Brother Andjelo Zvizdovic“. Popular belief is that in one of the towers there is an iron door at the entrance to some underground treasure room. Among the Muslims, there is a legend that Kastela should not be touched, because otherwise a great punishment would come to the village (Fig 27).



Source: <https://www.youtube.com/watch?v=FVSpjGJRO8U>, Accessed: June 10, 2025

Fig 27: The medieval 'Kastela' fortress near Fojnica

The Franciscan monastery of Fojnica ^[44] is located under the Kriz hill (Fig 28). The age of the monastery cannot be precisely determined, but documents confirm the presence of Franciscans in Fojnica as early as the beginning of the fourteenth century, on the basis of which we can conclude that in the first decades of that century they had a smaller house in the area of Fojnica, which was later moved to the location of the present monastery. The first was in Pazarisce. Over time, the needs for accommodation of intending travelers and others grew, which is why a separate room was needed. The others were more and more numerous, and the monastery was next to a passing road. When circumstances meant that the friars could no longer survive there, they moved to the hill above Fojnica, to Kriz hill. In 1502, in a dense forest, they laid the foundations of a new monastery, in the same place where it is today. Due to the Ottoman persecution of Catholics, the monastery and the church in Fojnica were destroyed. It was in 1524. The monastery was restored in 1913. According to the design of the architect Lavrencic, the monastery was significantly expanded by the

construction of an additional tract in 1940. This new part was used as living space, and the old monastery building was used as a library and museum. The residential part was thoroughly renovated from 1987 to 1990.



Source: Author (September 21, 2007.); Saima Hadrovic (September 21, 2007.)

Fig 28: Franciscan monastery in Fojnica

The Atik (also Djevojacka or Hadrovica) mosque is located at the foot of Prangija hill. Written sources mention that the first mosque in Fojnica was built by an autochthonous resident of the town, Mustafa Hadr son of Hizar, in 958 or 1551. A wooden minaret was added to the masjid in 1570, giving Fojnica its first mosque. At that time, towns could not become kasabas until they met three conditions, namely that they had a mosque, a permanent congregation and a market



Source: Author (July 29, 2016)

day. The mosque was renovated in 1820, and the inscription above the entrance door written by Sheikh Abdulrahman Sirrija (1775-1847) speaks about it; the renovation was led by Sirri-baba, the sheikh of the tekke on Oglavka in Fojnica. "Thank God when this place of worship is built again, and all the residents of this region wanted that very much. Everyone made an effort, because this is an old place. May the Creator reward their efforts. From Sirrija's heart comes a mysterious chronogram expressed in two stanzas, and also in numbers. In this stanza he is looking for a secret. One thousand two hundred and thirty-six, the chronogram was compiled, 1236", it is written on the tarikh at the entrance to the mosque (Fig 29).



Source: Author (September 2, 2016.)

Fig 29: Hadrovic's mosque in Fojnica (built in 1551)

Musafirhana in Fojnica (Salihagic's house) is located in the city center, on the right bank of the river Scona, near the Atik (Hadrovic's) mosque (built in 1570) ^[42]. The exact time of construction of this house is not known, but it can be indirectly concluded that the building was built in the middle of the 19th century, since its builders were the brothers Muhamed-aga, Mehmed-aga and Mahmut-aga Salihagic, sons (or grandsons) of Salih-aga Iskrac who participated in the Dubic War (1788-1791). Due to its exceptional architectural-historical and ambient values, this building, along with the monastery and the Atik mosque, over time became one of the symbols of the Fojnica neighborhood (Fig 30).



Fig 30: Musafirhana u Fojnici

In the surroundings of Fojnica and Gornji Vakuf/Uskoplje, you can still find traditional houses, among them the Bosnian chardaklia house, such as the house of the Zekotic family in Voljevac and the house of the Buljina family in Majdan near

Fojnica, for example). Most of these houses, as well as the villages where they are located, are abandoned ^[45] (Figs 31,32).



Source: Author (April 10, 2011)

Fig 31: An old Bosnian house in the Rizvici village near Fojnica



Source: Author (April 10, 2011)



Fig 32: Left: An old Bosnian house in the Vladici village near Fojnica. Right: Bosnian chardaklia house in the Majdan village near Fojnica

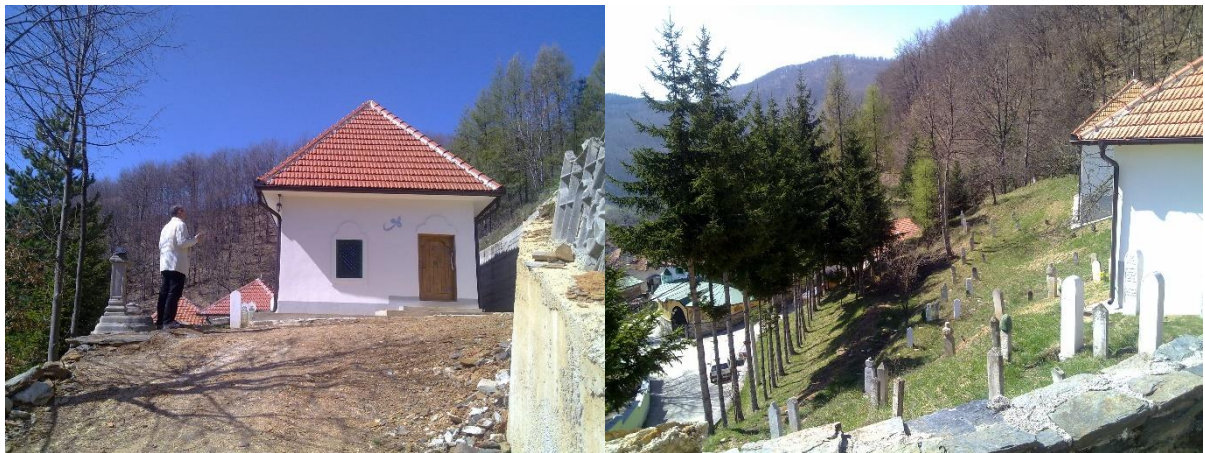
The tekke in the Vukeljici village belongs to the Naksibendi sect. The tekke was founded by Sheikh Husein-baba Zukic (?-1799). This tekke is one of the few with an uninterrupted continuity of activity and work from its founding to the present day. She contributed to the spread of the Naqshbandi Tariqa throughout Bosnia and Herzegovina. In 1790, Sheikh Husein-baba brought Abdurahman, the gifted son of the Fojnik kadi, to the tekke as his student. After several years spent in the tekija in Vukeljici, Abdurahman Sirrija, on the recommendation of his teacher Husein-baba, founded a new Nakshibendi tekke in the Oglavak village near Fojnica. When Husein-baba Zukic died, he was buried on the hill above the tekke, in the largest of the three existing turbet. After his

death in 1799, Sheikh Haji Muhamed Mejli-baba became the sheikh of the tekke. After his death in 1854, the leadership of the tekke remained in his family, which later had the surname Hadzimejlic. Mejli-baba was succeeded by his son Sheikh Hasan-baba who died in 1898. Hasan-baba was succeeded by his cousin Sheikh Muhammad, and Muhammad by his son Sheikh Abdullatif. Abdullatif was succeeded by his son, Sheikh Behaaddin. There is no information on what the tekke built by Sheikh Husein-baba looked like. The tekija was renovated for the first time in 1930, when the tile cover was replaced with tiles. The last renovation was carried out in the 1990s, when the building was significantly expanded and an attic was built (Figs 33, 34).



Source: Author (April 10, 2011)

Fig 33: The Tekke in the Vukeljici village near Fojnica



Source: Author (April 10, 2011)

Fig 34: Three turbets next to the tekke in the Vukeljici village near Fojnica

In the area of the Vranica mountain, and especially in the villages around Fojnica, the tradition of traditional production of charcoal has been maintained until today.

Production ('firing') takes place in special structures ('cups', 'tupa') built of brick and melted on the outside (Fig 35).



Source: Author (November 4, 2011)

Fig 35: Traditional production of charcoal (Zivcici village near Fojnica)

Breeding of sheep in an extensive, traditional way in Bosnia and Herzegovina has a tradition since prehistoric times. Many mountains in Bosnia and Herzegovina (Bjelasnica, Vlasica, Vranica, Treskavica, Zelengora, Sator...) were grazing grounds for millions of sheep (and large cattle). Breeding sheep in the traditional way in the mountains is still today the basic occupation and earning of living income for many families. A common characteristic of sheep breeding in the mountains of Bosnia and Herzegovina is semi-nomadic

herding, where flocks of sheep are 'driven' to the mountains during the summer period, and are taken care of in the villages at the foot of the mountain during the winter period. During the winter period, some shepherds drive their flocks into the plains (Posavina, and before the breakup of the SFRY in Slavonia and Vojvodina). Vranica mountain has wide expanses with pastures and numerous herds of sheep and cattle graze there even today (Fig 36).



Source: https://41338573-213201863863258730.preview.editmysite.com/uploads/4/1/3/3/41338573/vranica-img-9937_orig.jpg

Accessed: June 11, 2025

Source: <https://www.youtube.com/watch?app=desktop&v=Uz1mqMjAQPk>,

Accessed: June 11, 2025

Fig 36: Breeding of sheep and cattle on the Vranica mountain

Today's breeding of sheep and cattle on the Vranica mountain is basically traditional, but modern life patterns from the lives of the people from the villages at the foot of the Vranica,

where they primarily live, are introduced into life on the mountain (Figs 37-44).



Source: <https://www.youtube.com/watch?app=desktop&v=Uz1mqMjAQPk>,

Accessed: June 11, 2025

Fig 37: The atmosphere in a cottage on the Vranica mountain



Source:
https://lh5.googleusercontent.com/p/AF1QipNE65_3jFtV3hw_VM_W5VQGt0TEoYJY0ZRIQqdh=h720
Accessed: June 11, 2025

Fig 38: One katun on the Vranica mountain

In addition to their primary occupation, cattle breeding, people on the mountain are engaged in picking forest fruits

(blueberries, cranberries, mushrooms, medicinal plants...), (Fig 39).



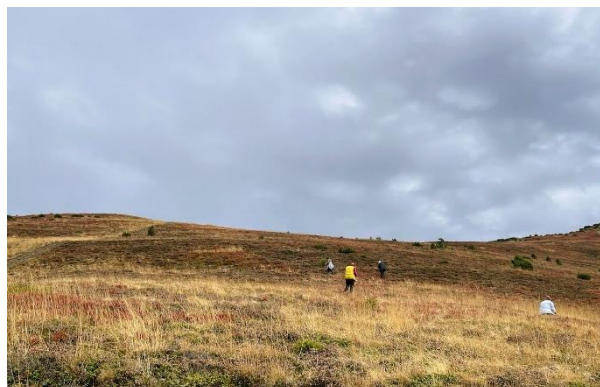
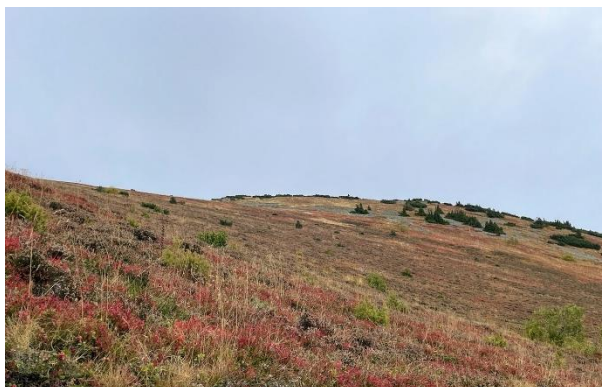
Source: <https://www.youtube.com/watch?app=desktop&v=Uz1mqMjAQPk>,
Accessed: June 11, 2025



Fig 39: Picking forest fruits on the Vranica mountain

Cranberry (*Vaccinium vitis-idaea*) is a wild plant that grows in higher areas and mountains. In addition to its refreshing sour aroma and taste, cranberry is often used in traditional medicine for its healing properties. This berry is rich in antioxidants, vitamin C, fiber and many other nutrients. Eating cranberries can help strengthen the immune system, reduce inflammation and improve digestion. In addition, cranberry is known for its ability to prevent urinary

infections, as it prevents bacteria from attaching to the walls of the bladder. This combination of natural resources and human activity enables the local population to generate significant income by picking medicinal plants. In addition to cranberries and blueberries, pickers collect different types of herbs that are used to prepare medicinal teas. These teas are sought after for their beneficial health effects, and local pickers are key members of the supply chain (Fig 40).



Source: https://gornjivakuf.com/2023/10/10/foto-beraci-bilja-na-vranici/#google_vignette,
Accessed: June 11, 2025

Fig 40: Cranberry picking on Vranica mountain



Source: <https://www.prometej.ba/clanak/ljudi-i-krajevi/kako-sam-prosao-na-svom-planinarenju-po-vranici-2586>,
Accessed: June 11, 2025

Fig 41: Katun of the Gafic family in Korita (Vranica)



Source: <https://www.youtube.com/watch?v=Y89DGiCAiks&t=30s>,
Accessed: June 11, 2025

Fig 42: One new katun on Sikira - Vranica mountain (owners Himzo and Senida Cajlakovic from the Vukotici village near Zenica). Katun is located 5.5 km southeast of Prokosko lake (geographical coordinates: 43°55'31.80"N, 17°48'04.73"E, altitude 1561 m)



Source: <https://www.youtube.com/watch?app=desktop&v=CobaovC8XC0>,
Accessed: June 12, 2025

Fig 43: Traditional table in the katun Vrtaca village near the Prokosko lake



Source: <https://www.youtube.com/watch?v=XdFxaHizwKU>,
Accessed: June 12, 2025

Source: <https://www.youtube.com/watch?app=desktop&v=pVw8ye0nhB0>,
Accessed: June 12, 2025

Fig 44: Katuns on the Vranica mountain

3. Man

Space acquires meaning only if it stands in some relation to man. This relationship ranges from the relationships of the already known dimensions of space, through those that can be sensed, to those that are currently beyond the reach of human imagination. In other words, man is a being on the way, a being who continuously learns, a being of open possibilities. The term 'man' is a huge question, the essence of which he himself tries to decipher within his own limits, within the limits of the Earth and the limits of the Universe^[1]. Together with the rest of the living world, it participates in the process of circulation of matter and energy in nature, sharing the same fate with it, being born and dying against its will. In the lives of people in the upper reaches of the Vrbas river, the Vranica mountain occupies a mythical place. In the legends about the Vranica mountain, its lakes 'swallowed' careless nomads who grazed cattle on the banks. One of the most famous legends related to Vranica is the one about the

'Red Earth'. In the dense forests of subalpine spruce at an altitude of about 1770 meters, there is a bare elevation called 'Crvena zemlja' ('Red Earth'). Several interesting legends are connected to this mystical place. One of them says that there was a church of the Bosnian kingdom in this place. The church of St. Elijah, the patron saint of Bosnia, is also mentioned. With the arrival of the Ottomans and the flight of Queen Katarina in 1463, local believers buried the church with earth in order to preserve it. Tradition goes on to say that ninety-nine women brought soil in aprons. It is even said that they were all namesakes - Mary, who preserved the church under the red earth, and if that was the case, some believers are inclined to say that even today, on the eve of every Ilinda, before the sun, the church bells can be heard from the bowels of the bare hill which rises above the dark coniferous forest. The story still circulates today: whoever tried to dig in the red earth would be prevented by a strong storm. Due to the sudden rain, thunder and stormy wind, many had to flee to

save their lives^[46]. Golet 'Red Earth' remains in the wooded bosom of Vranica as a great secret over which one remains both pensive and amazed at the same time (Fig 45).



Source: https://lh5.googleusercontent.com/p/AF1QipNI7opvaRsH1U-00qhGsWYkc6DfoZ_0sgyqXecL=w459-h306-k-no
Accessed: June 12, 2025

Fig 45: 'Crvena zemlja' ('Red Earth') on the Vranica Mountain

How legends are created is one of the fundamental anthropological questions throughout history. It is unclear how they arise, but it is also clear how they disappear and die. A good example is Prokosko lake, once one of the most beautiful lakes in Bosnia and Herzegovina, located on the Vranica mountain, at an altitude of 1,636 meters, twenty-two kilometers from Fojnica, in whose administrative boundaries it is located. It is a glacial lake in whose waters the autochthonous newt amphibian once lived. Although in 2005 Prokosko lake was declared a natural monument, on which any construction is prohibited, this did not prevent individuals, with the tacit consent of the competent authorities, from building cottages, restaurants or apartments that they rent to tourists. Today, there are over three hundred

illegally built buildings in that area. Dozens of pipes have been driven into the springs, which feed the lake with water, which redirect the water to the gardens and buildings built around the lake, instead of feeding the lake naturally, so that instead of spring water, sewage water flows into the lake. The devastation was completed when the 'locals' introduced trout into the lake, which exterminated the native newt. According to many experts, the process of turning the lake into a swamp is underway. Due to the spilling of feces and waste water into the lake, the process of development of marsh vegetation intensifies, which has negative consequences and results in accelerated waterlogging and the disappearance of the lake itself. The legend of its origin, written by Jovan Popovic in 1931, will die with Prokosko lake. According to her, Prokosko lake was located in a different place and it was not allowed to wash anything impure in it. A woman washed a child's diapers in it, whereupon the lake stirred and followed her. She started to run away in fear, whereupon someone told her to stop and throw the scarf from her head as far away as possible. She did so and the lake flowed into the bay over the thrown scarf. According to legend, nothing dirty can be washed in the lake, nor can impurities be thrown into it. On the southern slopes of Vranica mountain, there is a beautiful Štrapala waterfall, at an altitude of about 950 m. There is also a legend associated with this pearl of nature, which refers to the mooring of ships in this place, because in the middle of the waterfall there is a large steel shackle, for which it is not known when and for what reason it arrived at that place. This is how the local people created a legend that there was a sea shore that dried up, and then the source of one of the tributaries of the Vrbas was born in that place. In addition to the natural beauty, Prokosko lake is also decorated and refined by the hosts, the residents of the Fojnica villages, mostly of an older age, who have been tied to this natural gem their whole lives. They were born there, grew up and in their youth were shepherds in Vranica and never left it (Figs 46-49).





Source: <https://turisticki.ba/2023/10/31/hazema-i-salih-burekovic-prave-najbolje-domace-pite-na-prokoskom-jezeru-turistu-budu-odusevljivni-kada-probaju-nasa-jela/>,
Accessed: June 12, 2025

Fig 46: Traditional dishes in the katun settlement on the Prokosko lake on the Vranica mountain (hostess Azemina Burekovic)



Source: <https://www.youtube.com/watch?v=umZQaOjQZKU>,
Accessed: June 12, 2025

Fig 47: Housewife Omerovic Subhija in the Vrtaca katun village on Vranica in her daily work





Source: <https://www.youtube.com/watch?v=YAa5FgVXsFo>,
Accessed: June 12, 2025

Fig 48: Lunch at the Cajlakovic family in the Sikira katun village on Vranica after bathing the sheep



Source: https://www.youtube.com/watch?v=xYl_jY54YNU&t=37s,
Accessed: June 12, 2025



Fig 49: Gathering of people at Kraljevo Guvno on Scit Mountain

National shrine of St. Jakov Markijski in Dezevice near Kresevo (located between the slopes of the Vranica and Bitovnja mountains) is visited by Catholics from Bosnia and Herzegovina, as well as members of other religions and pilgrims from all over the world, especially on New Sundays, when the main mass is held at Vrel. In 2015, a pilgrim's home named after St. was opened in Dezevice. Jakov Markiski (Fig 50). Construction of the home began in 2011, and it was built in the parish yard of the Church of Our Lady of the Snows. The home is used for the reception and accommodation of pilgrims who come to the parish during the year. About 200 meters from the village, there is a cave where Jakov Markijski

(c. 1391-1476) lived. For centuries, the people have called that place Voda stogi Jakov or Vrelo stogi Jakov, and the water that is in the cave at any time of the year does not flow out of it. The water from the spring is considered miraculous, so many Catholics, especially for the celebration of the feast of Our Lady of the Snows, come to the cave, wash in the water, which they later take home in bottles. The water from the cave is considered particularly useful in cases of fever, so one of the names for the water is Grozničavica. In the village of Carev Do near Fojnica, in the spring and autumn on the 'Blessing of the Fields', the 'Bishop's grave' is worshiped (Fig 51).



Source: <https://trail.viadinarica.com/bs/point/hodocasnicka-ckva/voda-vrelo-sv.-jakova-markijskog/17452730/#dmlb=1>
Accessed: June 13, 2025

Fig 50: St. Jacob's spring in Dezevice



Source: <https://www.youtube.com/watch?v=zccsWQxuGAo>,
Accessed: June 13, 2025

Fig 51: Veneration of the 'Bishop's grave' in the Carev Do village near Fojnica (in spring and autumn at the 'Blessing of the Field')

Tekkes have their own interesting history, and they enjoy special respect among the ordinary people of Bosnia and Herzegovina. Next to the tekkies are turbeta (mausoleums) where especially dedicated people (sheikhs) are buried. For many people, visiting such localities is a pilgrimage where they are supplied with new life energy and at the same time get rid of various 'sufferings' that everyday life brings. Within the complex of each tekke (throughout Bosnia and Herzegovina), the fountain is an indispensable detail. Mandatory, there is a fountain that is at the service of those guests who are 'passing', oriented towards the street^[47]. There are several tekkes in the area of Fojnica: two in the Vukeljici village, and tekkes in Zivcici and Oglavak. The tekke on Oglavak belongs to the Naqshibendi sect (Fig 52). Sheikh Abdurahman Sirrija (1775-1847) built the tekija on his property in 1798. Until the Second World War, manuscript treasures of inestimable value were housed in this tekke. Tekke was damaged for the first time during the Second World War, when the German army stole from it the Koran copied during the time of the third caliph Osman. It was one of the first copies of a handwritten Quran from the 7th century. There are some indications that this very copy of the Qur'an is today in a museum in Berlin. During the time of Sheikh Sirrija, Tekke on Oglavak was an important center visited by all famous Bosniaks. Sheikh Sirrija's reputation and influence were so great that every governor of Bosnia

considered it his duty to visit this Sheikh. The influence of Sheikh Syria and the number of learned and powerful people who were his dervishes contributed to the fact that the Oglava tekija was at that time the most important institution of its kind in Bosnia and Herzegovina, and this was reflected in its intensive development. Sheikh Syria's murids (disciples) were viziers, muftis, qadis and poets. In the history of Bosnian Sufism, there are no similar examples of sheikhs who enjoyed such a reputation among all layers of society, to whom poor dervishes and people from important positions in political, social and religious life came for advice. It is known that Husein-captain Gradasevic (1802-1834) and Ali-pasha Rizvanbegovic (1783-1851) came to Oglavak tekke to express their respect to Sheikh Sirrija. The tekija on Oglavka is one of the six tekijas in Bosnia and Herzegovina that survived after the banning of dervish orders in 1952. During the war in Bosnia and Herzegovina in 1993, the Oglavak tekke was burned down by HVO units. On that occasion, books, tablets and calligraphic inscriptions were destroyed, some of which were recorded and documented before the destruction. In 1998, the building was renovated. In 2018, tekke was declared a national monument of Bosnia and Herzegovina. Along with Hadzi Sinanova and the tekkes in Blagaj and Vukeljici, the tekke on Oglavak is the fourth object of its kind to be declared a national monument of Bosnia and Herzegovina (Fig 52).



Source: Ahmet Hadrovic (March 24, 2013)

Fig 52: Tekke on Oglavak near Fojnica

4. Boundaries

'Boundaries' are those places in the environment where the situations encountered are controlled according to very specific human needs. Conditions are all those discovered and undiscovered phenomena in space that have a stimulating or degrading effect on humans. Borders, therefore, have the task of enabling the selection of influences. In the architectural sense, they enclose, but also include a person in the conditions of a certain environment^[48]. In this work, life on the Vranica Mountain is discussed in a sustainable way. In the processing of this chapter, attention will be focused primarily on mountain huts (katuns). Given that the life of the people on the Vranica mountain range is essentially connected with their life in their home villages at the foot of this mountain, the theme of 'border' includes the elaboration of the life of the people in these villages, and beyond, in the city of Fojnica, Gornji Vakuf/Uskoplje^[49], Kiseljak^[50], Kresevo^[51], Busovaca^[52] and its surroundings. 'Katun' is a word of Vlach-Albanian origin, and it refers to a shepherd's temporary summer shelter on the mountain (Figs 53-60). These are modest shelters, built from available materials, most often as stone and wooden dry walls covered with shingles. On the mountains in Bosnia and Herzegovina, we meet different katuns, both in terms of their size, architecture, construction and materialization, as well as in terms of the level of interior equipment. Although these are, as a rule, temporary dwellings for staying in the summer period (from May to October, as a rule), in some katuns you can also stay during the winter period. Today, the term 'katun' has also been extended to buildings for housing and domestic economy made as modern residential buildings and buildings intended for the stay of tourists.



Source: <https://www.youtube.com/watch?v=CobaovC8XC0&t=9s>,
Accessed: June 13, 2025

Fig 53: A newer cottage/katun on Vranica

The most famous katuns in Vranica are on Prokosko lake, Vrtaca, Otigosce, Golica and Gvozdjanske stajе. The Prokosko lake is located at an altitude of 1635 meters above sea level. (geographic coordinates: 43°57'26.30"N, 17°45'16.73"E), is 330 m long and 255 m wide, the depth measured so far is 12.80 meters. The amphibian Triton Alpestris (*Triton Alpestris Reiseri*) lives in the Lake, and also the Alpine rose (*Rhododendrom hirsutum L.*) grows in the immediate vicinity of the lake as an endemic specimen in Vranica. The lake is 22 km from Fojnica and has been a

protected area since 2005, it belongs to the category „Natural Monument-III“. The lake is reached by a road that is mostly macadam. About 250 cottages were built around the lake, where catering services are provided. Among the morphological diversity, the following peaks can be singled out: Debelo brdo, Glavica, Coso, Tikva, Treskavica, Zelena gromila, Strazica, Runjvica, Vratolom and Krstac (Fig 54). The most famous households in the katun on Prokosko lake are Saliha and Azem Burekovic, Muhamed Burekovic and Naima Burekovic.



Source: Author (November 7, 2015)

Fig 54: The katun village on Prokosko lake

The katun Vrtaca village is located on the mountain of the same name (geographical coordinates: 43°56'34.72"N, 17°47'41.38"E, altitude 1485 meters) southeast of the Prokosko lake^[53]. There are about fifty katuns whose owners are from the settlement Local community Prokos in Fojnica. The katun village is about 17 kilometers from Fojnica, which can be reached via Tovariste via an asphalt lane, and further along a macadam road along the sparkling clear Borovnica river. In winter, it is possible only by walking. The height of the snow is from one to two meters, and in places there is debris up to three meters. People with their livestock go out to katun at the beginning of May and stay until the first snows. Forest fruits are harvested there - blueberries and cranberries. There is plenty of clean mountain water, and the terrain is suitable for hikers, hikers and fishermen. Households also provide services for visitors, home cooking, pies, lamb on a spit, juices, teas, forest herbs and medicinal herbs, all in agreement with the hosts (Fig 55).



Source: <https://www.katunroads.me/vranicki-katuni/>,
Accessed: June 13, 2025

Fig 55: The katun Vrtaca village

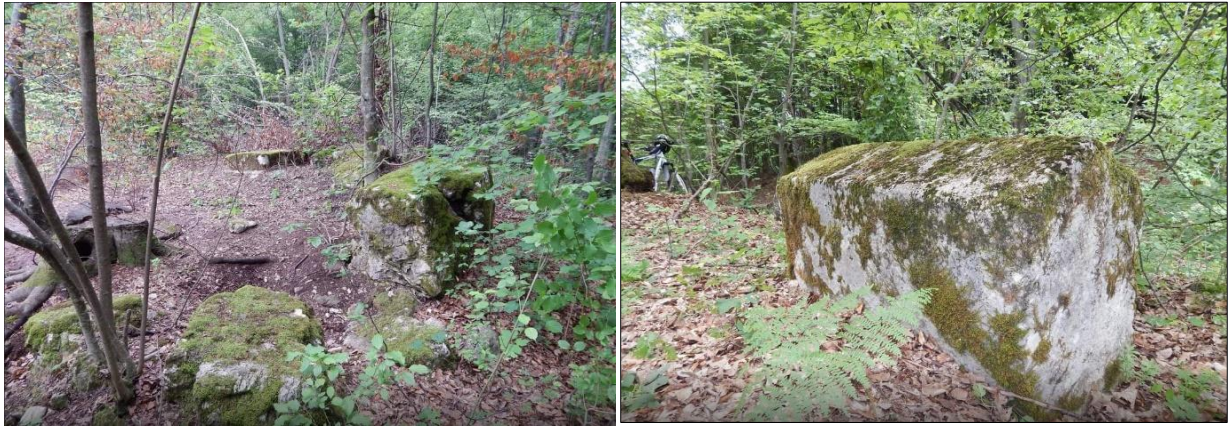
The katun Otigosce village is about 7.5 km away from Fojnica as the crow flies (geographical coordinates: 43°55'50.94"N, 17°58'17.60"E, altitude 951 meters). People lived in Otigosce as far back as the Middle Ages, and probably earlier, as evidenced by the old cemetery, a larger necropolis of stećaks located in a beech forest outside the village. On one side of the road are stećaks from the early Middle Ages, of various shapes and sizes, without any markings. The first data on the number of inhabitants in

Otigosce can be found in the census of Bosnia Srebrena from 1856, under the name Otigosice. This region is known for very hardworking and honest people who have always been engaged in agriculture and animal husbandry. In this area there are fairy-tale landscapes where even today we can find large herds of large cattle, and every part of this area exudes the traditional way of life of the inhabitants of that climate (Figs 56,57).



Source: <https://www.katunroads.me/vranicki-katuni/>,
Accessed: June 13, 2025

Fig 56: Otigosce settlement



Source: <https://fojnica.net/vijesti/fojnica/kameni-svjedoci-vremena-u-fojnici-stecci/>,
Accessed: June 13, 2025

Fig 57: Stecak necropolis near the Otigosce village near Fojnica

The katun Golica village is located on the western slopes of the Matorac massif (geographic coordinates: 43°55'38.47"N, 17°50'23.82"E, altitude 1612 meters), below the peak of the same name (1937 meters above sea level) and the famous Vran stone (1865 meters above sea level). It is about 8 km southeast of Prokosko lake. Stay in this unique location and in a recently renovated katun, adapted for accommodation of up to 10 people, in the immediate vicinity of the source of drinking mountain water. Katun can be accessed from Fojnica, from two directions: by a marked hiking trail, directly from Fojnica, towards the top of Matorac, to the Gorevina pass (in about 3 hours of walking), where the trail separates and in an additional 30 minutes of walking, you can reach katun on Golica; the second approach is via the marked

hiking trail from the „Brusnica“ motel on Poljana, along the ridge of the Matorca mountain massif, to its homonymous peak (in about 1.5 hours of walking) and an additional 30 minutes of descent to the katun on Golica. Golica is an ideal starting point for shorter and longer hiking tours to the Zec and Pogorelica mountains, the Vitreušā massif, the source of the Vrbas river, the Prokosko lake and many peaks of the Vranica mountain over 2000 meters above sea level. There are also two facilities in Golica that, in agreement with the hosts, provide services from renting katuns to preparing homemade food, made from exclusively organic ingredients from their own cultivation. Famous households in Golica include Refik Basic and Nihad Orman (Fig 58).





Source: <https://www.katunroads.me/vranicki-katuni/>,
Accessed: June 14, 2025



Fig 58: The katun Golica village

The katun 'Gvozdjanske staje' ('Iron stables') village is located in the locality of Poljana (geographical coordinates: 43°57'13.63"N, 17°40'54.95"E, altitude 1986 meters), about 6 km west of the Prokosko lake. Throughout history, the location has been known for livestock grazing, not only for livestock farmers from the area of Fojnica, but also beyond. Forest fruits of blueberries and cranberries, as well as other herbs and medicinal plants that can be found in this locality,

have always been collected in this area. Katuns/huts are characteristic in that they are mostly small, simple, covered with kaplam and were mainly used for the personal needs of herders and people who were engaged in collecting and processing fruits. Currently, only a few facilities are active, which are mainly used for vacations. There are no organized service and catering activities, but nearby, in Poljana, there is a facility that offers complete facilities for visitors (Fig 59).



Source: <https://lh5.googleusercontent.com/p/AF1QipOYBVUNYkfscnqbV9I4UZ2t0C0c09NJf6ZzpxX2=h720>,
Accessed: June 14, 2025
Source: <https://fojnica.net/turizam/ljepote-fojnice-katunska-naselja-na-planini-vranici/>,
Accessed: June 14, 2025

Fig 59: The katun 'Gvozdjanske staje' ('Iron stables') village



Source: https://lh5.googleusercontent.com/p/AF1QipOSRyg23w44TlijSqUp_Qicp7Ilzv-zS5ZjxA=h720,
Accessed: June 14, 2025
Source: <https://www.prometj.ba/clanak/ljudi-i-krajevi/kako-sam-prosao-na-svom-planinarenju-po-vranici-2586>
Accessed: June 14, 2025

Fig 60: Left: One katun on the Vranica mountain, northwest of the Brusnica village (geographical coordinates: 43°55'57.92"N, 17°51'05.94"E, altitude 1516 meters). Right: Katun Edin and Fatima Gafic from the Vrse village near Gornji Vakuf/Uskoplje on Korita, Vranica

Mountain lodge „Rosinj“ was built in 2000 at the foot of the peak of the same name (geographical coordinates: 43°57'02.06"N, 17°39'46.62"E, altitude 1684 meters). It is about 6 km as the crow flies from the center of Gornji Vakuf/Uskoplje. The home has a living room with 45 seats, sanitary facilities, a kitchen and 50 beds in the rooms and the attic of the home. Next to the home there is a covered fireplace with 20 places and next to the fireplace-canopy with about 50 places. As there is a dormitory with another 20 beds in the attic of the fireplace-canopy, the total capacity of the home is 70 beds. There is also an outdoor fountain next to the home. Tables with benches made of wooden semi-circles are placed around the home (about 70 seats). From Gornji Vakuf/Uskoplje, the home can be reached by car from two directions: via the Vrsa and Bosnjak villages on a 12 km long macadam road and from the other direction via the village of Bistrica, Rika canyon and Suhodol on a 22 km long macadam road to the home. From the direction of Fojnica via Prokoški

jezera, you can reach the „Rosinj“ mountain lodge in 40 minutes by small and all-terrain vehicles on a macadam road. The house can be reached in approx. 3 hours by footpath over Bosnjak. The hiking trails that lead from the direction of Gornji Vakuf/Uskoplje, Prokosko lake, Radovina and Uloznica towards the lodge are marked and marked. Next to the lodge is a dirt road that leads through the Sarajevo Gate to Prokosko lake. Radovina mountain lodge is located on the southern slopes of the Vranica mountain (geographical coordinates: 43°56'17.96"N, 17°42'01.87"E, altitude 1485 meters). It is about 7 km away from the center of Gornji Vakuf/Uskoplje by air. The home has a capacity of 50 beds. On the ground floor there is a living room of 50 m², a kitchen, a pantry and toilets, which include a bathroom with hot water. Apart from the three rooms on the ground floor, there are most of the rooms and a smaller toilet on the first floor. The home is equipped with solar electrical installations with a capacity of 5KW; it is open throughout the year (Fig 61).



Source: <https://www.youtube.com/watch?v=RIWiX8DJ8us>,

Accessed: June 14, 2025

Source: <https://ramski-vjesnik.ba/clanak/najava-manifestacija-dani-vranice-2024-ljubo-barnjak/235643/>,

Accessed: June 14, 2025

Fig 61: Left: Mountain lodge „Rosinj“. Right: Mountain lodge „Radovina“

Fojnica was first mentioned in written documents on March 18, 1365. In addition to thermal waters, natural beauty and cultural and historical monuments, Fojnica was once known as a mining center. Ostruznica silver mines, Cemernica mercury mine and Bakovići gold mine, which worked until the beginning of World War II, used to work in Fojnica. The beginning of the development of mining in Fojnica is considered to be the arrival of German Saxon miners in the era of Ban Stjepan II Kotromanjić (1292 - 1353). The gold mine in Bakovići was founded sometime around 1885. Today it is neglected, only the remains of walls, concrete and tailings show that there was once a mine there. From the entrance pit into the mine, water with a yellow sediment comes out, which settles and goes to the Gvozdjanka river. On the road between Fojnica and Dezeveica, at the source of the Gvozdjanka, is located Dusina (geographical coordinates: 43°52'38.96"N, 17°55'48.37"E, altitude 776 meters), once a well-known settlement of miners who, in the surroundings, mined silver ore and handed it over to mine tenants and customs officials of the Bosnian kings of medieval Bosnia.

Today, Dusina is a settlement at the crossroads of roads, the endpoints of which are, in the direction of the east, Dezeveica, and in the direction of the south, a whole network of forest roads that lead to individual forest sites in the mountains of Pogorelica, Radava and on the slopes of Bitovinja. The inhabitants of Dusina maintain close ties with the inhabitants of the Neretva valley, in Herzegovina, since one of the traditional roads from central Bosnia to the regions around Konjic, Ostrožac and Jablanica, in the Neretva basin, leads right through Dusina. As in other centers, where during the time of Bosnian state independence, especially in the first half of the 15th century, mining activity reached its peak, with the arrival of the Ottomans, the intensity of mine exploitation decreased, and over time, it gradually ceased or acquired a different character. Toponyms around Dusina, as well as other parts of Fojnica, are named after individuals or families to which they once belonged or belong, according to the character of the land on which they are located, or because of the former mining activity (Fig 62).



Source:

https://lh5.googleusercontent.com/p/AF1QipOVH6v2z3EJx1OTritzB1JnVTKWpJUo_AAAsZCeK=h720,

Accessed: June 14, 2025

Fig 62: The Dusina village near Fojnica

The Cemernica village and the area on both sides of the river of the same name, the left tributary of the Dragaca, about four kilometers northwest of Fojnica (geographic coordinates: 43°59'20.28"N, 17°52'37.52"E, altitude 849 meters), belong to well-known mining areas, until the time of the Austro-Hungarian occupation (Fig 63). The proximity of Lagum, i.e. Gradina, confirms that there were mining operations and exploitation in Cemernica in the Middle Ages. This is supported by the names of several localities in the Cemernica valley, such as, for example, the toponym 'Karlica' (turned

into a meadow), where the water needed for washing ore was collected, and the toponym 'Kalhana', which is of Turkish origin, but refers to processing iron ores. Gojevici (geographic coordinates: 43°54'46.82"N, 17°56'40.76"E, altitude 631 meters), is a village predominantly inhabited by Croats. It is located at the confluence of the Kjaševac stream with the Zeljeznica (or Gvozdena rijeka), on the regional road R-437 Fojnica – Dusina – Ostrozac on the Jablanicko lake, where it exits onto the M-17, i.e. E-73 highway (Fig 63).



Source: https://www.facebook.com/photo.php?fbid=956089223198947&id=100063936340221&set=a.495424059265468&locale=hr_HR

Accessed: June 14, 2025

Source: <https://lh5.googleusercontent.com/p/AF1QipNOV7JftqZiqTSC2sjOIACI9xxq0mVuh6E-OkJK=h720>,

Accessed: June 14, 2025

Fig 63: Left: Mosque in the Cemernica village. Right: Church in the Gojevici village near Fojnica

The Grabovik village (geographic coordinates: 43°58'42.10"N, 17°55'24.99"E, altitude 646 meters) is two kilometers from the main road in Ostruznica and about 5.5 kilometers from the center of Fojnica. The village has a rich history and tradition. According to data from 1971, 208 people lived in this village. Residents of Grabovik, including the Sarac, Mesa, Mesanovic, Krsic, and Pamic families, engaged in animal husbandry, agriculture and sawmill work. The autochthonous Grabovik family is also the Kunic family, which no longer exists. The Osmancevic and Bucalo families moved into two houses. Although living conditions have

changed, Grabovik still preserves memories of its past times through numerous localities, including Podbasca, Grabovik, Lokve and Urvine. Among them, Lokve stands out with the old harem Igrisce and 'Kaurski greblje', places where the custom of lighting candles as a sign of respect for the dead is still practiced today. The village was once known for 8 mills that worked along the Grabovički stream, of which the only surviving mill was owned by Hadji Muja and Hadji Jusuf Mesa. Grabovik had an old school from the time of the Ottomans. The new school, built in 1979, continues the tradition of education represented by Hasan ef. Kunic, Asim

ef. Mujic, Kasim ef. Krsic and muezzin Mujo Mesa. Grabovik has cemeteries that bear witness to the lives of families that made it lively even in the past. Among them are the Mesa's cemetery, the Durak's cemetery and the Kunic

cemetery. The Kunic family, an autochthonous family of this village, left a significant mark in the history of Grabovik, although it no longer exists today (Fig 64).



Source: <https://mahalla.ba/2024/08/13/selo-grabovik-kod-fojnice-tragovi-proslosti-i-ponosni-heroji/>,
Accessed: June 14, 2025

Fig 64: The Grabovik village near Fojnica

The Merdzanici village (geographic coordinates: 43°58'27.14"N, 17°49'49.73"E, altitude 769 meters) is about 6 km from the center of Fojnica (Fig 65). The majority of the population are Bosniaks (133) ^[54].



Source: https://lh5.googleusercontent.com/p/AF1QipN1Y_uY2uhxUtNwuy1XO1dz7qLbp03mFE5TWbo=h720
Accessed: June 14, 2025

Fig 65: The Merdzanici village near Fojnica

North of Fojnica, separated by the mountain saddle 'Vladicki vrh', there is a valley through which the Kozica river flows in a northeast direction (geographical coordinates: 44°01'33.83"N, 17°54'39.02"E, altitude 550 meters). On both sides of Kozica, on steep slopes, there are villages. The whole area is called Pridola, although each village has its own special name. The settlements in Pridol include: Kozica, Majdan, Vukeljici, Zivcici, on the left bank of the Kozica river, and Dragacici, Vladici, Botun, Rizvici and Bioncici on its right bank. There were iron ore mines in Pridola in several places. Thus, for Kozica, there is a testimony from 1865 that there are mines in that village that supply iron ore to the Fojnica 'smokehouses', that there are mines up to 70 m deep, they are lit with oil lamps, and the ore is obtained with clavica (mining hammers), without the use of explosives ^[45] (Fig 66).



Source: Author (April 10, 2011; April 17, 2011)

Fig 66: View of the Vukeljici and Zivcici villages (and the Vladici village, in the foreground) from the Vladici-Dragacici road

Southeast of Fojnica, in the wider valley of the Zeljeznica river (also, Gvozdjanka), there is a group of settlements collectively called Gvozdjani (geographical coordinates: 43°55'07.48"N, 17°56'40.71"E, altitude 614 meters). There is no village with the same name, so Gvozdjani is the name for the entire area, as is often the case in the Fojnica region

(Pridola, Prokos, Scitovo). The district of Gvozdjani includes Bakovici, Citonja, Luzine, Bozici, Otigosce, Orasine, Ponjusina, Gojevici, Dugo Brdo and Bistrica. The center of the entire area is Bakovici, where a clustered settlement was formed in recent times, created in connection with the exploitation of the mine. Like other regions around Fojnica, in which traces of old mining have been found, in Gvozdjani there are several toponyms whose origin should be sought in the former mining activity, such as Crvena zemlja, Rovovi, Kasice, Rudnica, Gvozdac, Batovaca, Zlatarnjaca. On Dvorine (arable field and meadow in Luzine) which belong to the village of Gojevici. In 1938, Ante Bosnjak and his wife Anica, while plowing, found a depot of 70-100 gold coins of the Roman emperor Vespasian (Fig 67).

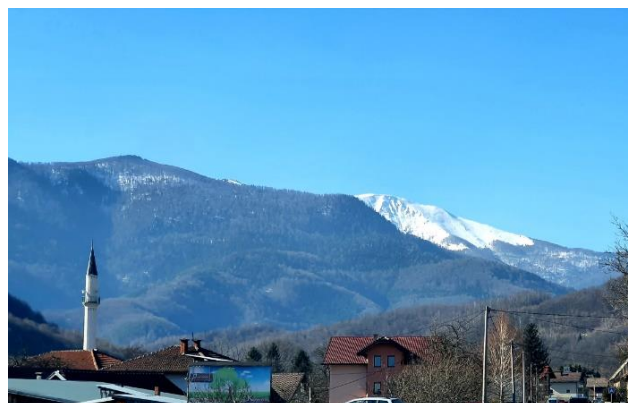


Source: <https://nove-info.com/selo-bozici-raj-na-zemlji-duh-stare-bosne-koji-se-bori-da-prezivi/>,
Accessed: June 14, 2025

Fig 67: The Bozici village near Fojnica

In the place of today's Ostruznica (geographic coordinates: 43°58'01.39"N, 17°56'01.62"E, altitude 547 meters), in the Middle Ages there was a famous mining settlement, about which, in historical sources, there is enough information to can, with some certainty, speak about the character of this, today rural, agglomeration in Central Bosnia. Ostruznica, as a mining center of the medieval Bosnian state, first appears in historical sources known so far at the end of 1349, when, among other things, mining pits in Ostruznica, owned by Pavlo Nikola Mencetic from Dubrovnik, are mentioned in one document. It is assumed that there was mining activity in Ostruznica even earlier, during the time of Ban Stjepan II Kotromanic (1292 - 1353), who in the charter of October 7, 1339, allowed Trogir merchants to come to his state for silver trade gold and copper. In 1364, the Bosnian ban (later king) Stjepan Tvrtko I Kotromanic (1338 - 1391) leased the mines of Ostruznica, and one of his charters from 1355 mentions the square in Ostruznica and the customs that were collected

during the time of ban Stjepan II Kotromanic. The document, written in September 1368, mentions a note from 1365, which says that Hans Sasinovic, on behalf of himself and his brother Niklo, sold half of his mining pits in Fojnica and Ostruznica to Jakob Ilije Kalegic and Paulusko Kudelinovic. In 1369, Hans Sasinovic sells copper from Ostruznica to the Venetian Johan Rambold, and in the same year the already mentioned Paulusko Kudelinovic gives a written statement, which is preserved in the Dubrovnik archive, that he sold to Kamenar Zor Boksic, well-known in the commercial and diplomatic affairs of medieval Bosnia all the copper, which, together with his brother, he owns in Bosnia, „in Ostruznica“. Another Dubrovnik source, from the year 1418, mentions Ostruznica again, in connection with trade negotiations between two Dubrovnik residents ^[55]. In the second half of the 15th century, after the arrival of the Ottomans in Bosnia, there was a certain stagnation, that is, a change in the character of mining activity in the medieval mines of central Bosnia. Iron ore is produced in the Fojnica mines, which is processed by domestic smelters and forges. Traveling through Bosnia, in 1832-1837, Ami Bue saw several tobacco houses in Fojnica, and the largest one was precisely in Ostruznica, somewhere near the mosque (Fig 68).



Source: <https://www.facebook.com/fojnica.net/photos/a.131523934235620/952836988770973/?type=3>,
Accessed: June 14, 2025
Source: https://lh5.googleusercontent.com/p/AF1QipOvgrIm7W-OUSNJMEg7JPgt_sbsUusnG26O9JA=w457-h306-k-no
Accessed: June 14, 2025

Fig 68: Mosque in Ostruznica

The oldest historical source that mentions the toponym Trosnik (geographical coordinates: 43°57'05.56"N, 17°54'51.17"E, altitude 577 meters) dates from 1561, when the Franciscan monastery of Fojnica bought a field in

Trošnik. Intensive mining operations were carried out in Trosnik until the Austro-Hungarian occupation, most probably even in the Middle Ages. In the Trosnik stream itself, an autopsy found huge quantities of large stones that were taken out of the stream alluvium, which is certainly the result of the work of miners-ore washers in that place. We can trace court documents, which primarily relate to property-legal issues (purchase of land and regulation of certain property rights of the Fojnica monastery) in Trošnik from 1568 to 1698, and all of them, indirectly, show that the area of Trosnik has been from ancient times was a place of intensive mining activity, apparently the exploitation of iron ore. Collapsed and abandoned mining pits can be seen in several places in Trošnik. Southwest of Fojnica, on the slopes of Vrhovo, a part of Matorac, is the old mining and blacksmith settlement Tješilo (geographical coordinates: 43°57'33.53"N, 17°51'48.33"E, altitude 884 meters). From year In 1485, there is an insufficiently clear information about the village of the same name ('on Tisilo'), which would be the oldest known written source about this settlement so

far (it is mentioned under the name 'Tisilo' in a list of limousines in 1761). The immediate surroundings of Tjesilo are known for numerous traces of mining activity (in the Ravanac forest there are piles of water-carrying stones, with considerable traces of red color, iron oxide), which initiated the creation of several folk legends about this settlement. It is said that in and around Tjesilo, once upon a time, the 'Greeks' mined ore, and when they had completely exhausted it, they left the area. Folk tradition interprets the origin of the name of the village in several ways: allegedly, once upon a time, old miners were buried underground, so many widows cried for them and comforted each other. It is also said that, immediately after the conquest of Bosnia, the Ottomans were exploring ores in the Fojnica region, so going upstream from Scitovo, they dug here and there in search of ore. These miners came from Man in Iran. Going along the river bed, they did not find anything anywhere until they came to Tjesilo, where they found ore and thus comforted themselves in that place (Fig 69).



Source: <https://www.youtube.com/watch?v=p4N8Jq10wBA>,

Accessed: June 14, 2025

Fig 69: The Tjesilo village near Fojnica

The road that leads from Fojnica to the upper reaches of Vrbas goes through the valley of the Dragaca river (that is, Rijeka, as the locals call it), then up the hill along the stream Jezernica, overcoming the mountain passes on Vranica whose peaks rise over two thousand above sea level. On both sides of Dragaca are the settlements Merdzanici, Mujakovici, Turkovici, Barakovici, Kazijevici, Obojak, Carev Do, Paljike, Klisura and Ragale with smaller hamlets. The common name of all these settlements is Prokos, although there is no village with that name (geographical coordinates:

43°59'04.26"N, 17°49'37.13"E, altitude 932 meters). According to folklore, 'Greeks' once lived in Prokos, leaving behind 'Greek cemeteries'. It is assumed that most of the settlements in Prokos date back to the Middle Ages. Traces of mining activities in the vicinity of certain settlements support the aforementioned assumption. So, for example, the village of Ragale is mentioned in 1555, when the Muslims of that village sold their meadow on the Kozluk mountain above Fojnica to a certain Frank (Fig 70).



Source: <https://mahalla.ba/2020/08/19/dzamija-u-turkovicima-kod-fojnice-zablistala-u-novom-ruhu/>,

Accessed: June 14, 2025

Fig 70. The mosque in the Turkovici village near Fojnica

The Borova Ravan (geographic coordinates: 43°51'18.76"N, 17°41'09.49"E, altitude 1023 meters) is a village in the

municipality of Gornji Vakuf/Uskoplje inhabited by Bosniaks (84 inhabitants, 2013), (Fig 71).



Source: <https://www.youtube.com/watch?v=Qd7rb30OMS0>,
Accessed: June 14, 2025

Source: <https://www.youtube.com/watch?v=AsRNeP7Iajg>,
Accessed: June 14, 2025

Fig 71: The Borova Ravan village near Gornji Vakuf/Uskoplje

The Cvrce village (geographic coordinates: 43°51'31.07"N, 17°41'50.87"E, altitude 1155 meters) in the Gornji

Vakuf/Uskoplje municipality is inhabited by Bosniaks (183 inhabitants, 2013), (Fig 72).



Source: <https://www.youtube.com/watch?v=AsRNeP7Iajg>,
Accessed: June 14, 2025

Fig 72: The Cvrce village

Kozice is a village in the Gornji Vakuf/Uskoplje municipality (geographic coordinates: 43°54'34.24"N, 17°44'55.87"E, altitude 1101 m) inhabited by Bosniaks (50 inhabitants, 2013). Pridvorci is a village in the Gornji Vakuf/Uskoplje

municipality (geographic coordinates: 43°50'58.23"N, 17°40'57.43"E, altitude 875 m) inhabited by Bosniaks (297 inhabitants, 2013), (Fig 73).



Source: https://www.facebook.com/photo.php?fbid=427968633881404&id=116017911743146&set=a.215770365101233&locale=ps_AF
Accessed: June 14, 2025

Source: <https://upload.wikimedia.org/wikipedia/commons/2/25/Pridvorci.jpg>,
Accessed: June 14, 2025

Fig 73: Left: The Kozice village near Gornji Vakuf/Uskoplje. Right: Pridvorci village near Gornji Vakuf

Seferovici is a village in the Gornji Vakuf/Uskoplje municipality (geographic coordinates: 43°53'04.78"N, 17°40'01.24"E, altitude 966 m) inhabited by Bosniaks (132

inhabitants, 2013), (Fig 74). Svilici is a village in the Gornji Vakuf/Uskoplje municipality (geographic coordinates: 43°53'34.77"N, 17°42'11.35"E, altitude 874 m) inhabited by

Bosniaks (158 inhabitants, 2013), (Fig 74).



Source: https://www.facebook.com/photo/?fbid=462951192540521&set=a.462951145873859&locale=fr_CA,

Accessed: June 14, 2025

Source: <https://lh5.googleusercontent.com/p/AF1QipP2irZLHVyvEGErygl2HlNXLou7bWoeLaEdBhQh=h720>,

Accessed: June 14, 2025

Fig 74: Left: The Seferovici village near Gornji Vakuf/Uskoplje. Right: Lake on Vranica above the Svilici village near Gornji Vakuf/Uskoplje

Voljevac is a village in the Gornji Vakuf/Uskoplje municipality (geographic coordinates: 43°52'43.54"N,

17°39'37.73"E, altitude 773 m) inhabited by Bosniaks (688 inhabitants, 2013), (Fig 75).



Source: <https://upload.wikimedia.org/wikipedia/commons/f/f5/Voljevac.jpg>,

Accessed: June 14, 2025

Source: <https://www.facebook.com/photo/?fbid=376778833335780&set=a.2147491608698802>,

Accessed: June 14, 2025

Fig 75: Voljevac near Gornji Vakuf/Uskoplje

5. Conclusion (Perspectives)

By the term 'Perspectives' in the framework of the theory of architecturally defined space (ADS), we mean „that dynamic relationship that connects now - future, existing - possible, achieved – desired“^[1]. The emergence of a settlement (hamlet, village) or architectural-engineering structure is never accidental, but is the result of synergy between the natural and social environment-man^[1]. The beginning of the development of mountaineering on the Vranica mountain dates back to the time when the Bosnian-Herzegovinian Tourist Club („Bosnisch-Herzegovinascher Touristen Klub in Sarajevo“), with the support of the State Government in Sarajevo, created a project for the development (in terms of tourism) of Ivan-planina, Bitovnja, Pogorelica, Zec - mountains and Vranica. In 1909, a hiking trail was arranged and marked with hiking signs on Ivan mountain on the route from the Bradina railway station (750 meters above sea level) to the weather station on Ivan-sedlo (959 meters above sea

level). In 1910, work continued on the arrangement and marking of the footpath from Ivan-sedlo via Bitovnja to Pogorelica, Zec and Vranica. The entire work on the arrangement of the trails was completed in 1913, after which the construction of mountaineering facilities on Bitovnja (near the katun on Scavlje), Pogorelica (in Suho dol), Zec (on the Vlaska Mountain) and Vranica (on Prokosko lake) had to be started lake), but these plans were interrupted by the First World War (1914-1918). The period between the two world wars (1919-1941) was filled with great excitement and enthusiasm. It was a generation of lovers of mountaineering that left behind 38 mountaineering facilities (Bosnia and Herzegovina was in second place in the number of mountaineering facilities in the then Kingdom of Yugoslavia, after Slovenia), the first mountaineering directions, winter ascents, the beginnings of what we now call touring skiing, hiking maps and guides that are still usable today. At that time, one of the most active societies was the „Society of

Mountaineers of Bosnia and Herzegovina“ (founded on February 10, 1921 in Sarajevo). Members of this society lead numerous work actions throughout Bosnia and Herzegovina, building new mountaineering facilities, arranging and marking old and new hiking trails. In 1927, the „Society of Mountaineers of Bosnia and Herzegovina“ from the direction of Bradina renewed the old markings on Bitovnja, as well as the access path to the peak of Lisin (1742 meters above sea level) and placed a new marking on this peak. He continued his activity in Bitovnja in 1929, where he adapted the facility near Katun in Scavlje (1580 meters above sea level), which until then was used by the Agrarian Directorate of the Kingdom of Serbia (the so-called 'finance service'), and equipped it with 15 beds, and then in 1932 he built a mountain a house in Suho dol (1222 meters above sea level) in Pogorelica (on the location of today's planned home of PD „Pogorelica“ Sorrel). A few years later, in the period from 1936 to 1937, he built a mountain house on Prokosko lake (1640 m) on Vranica. From 1933 to 1935, he marked the main ridge on Bitovnja with winter markings (wooden poles 2 m high), also in the same way on Zec mountain. In the period between 1932 and 1934, the „Society of Mountaineers of Bosnia and Herzegovina“ founded a mountaineering branch in Fojnica. In 1937, the „Croatian Mountaineering Society“ founded its mountaineering branch in Kreševo. In the same year, the branch of HPD „Kreševo“ builds a swimming pool at the thermal spring of Banja. A little later (1940), he built a community center in the immediate vicinity of the swimming pool. These pioneering days, significant for the development of mountaineering in Bosnia and Herzegovina, were interrupted by the Second World War (1941-1945). In 1935, „Guide to the Mountains of Bosnia and Herzegovina“ was published for the first time in our language. The author of the guide is Jovo Popovic - curator of the National Museum in Sarajevo. The publishers of the guides are mountaineering societies from Sarajevo. The description of the Vranica mountain group is illustrated with photographs and three maps (Ivan mountain-Bitovnja, Pogorelica-Zec-Matorac and Vranica-Scit) with marked hiking trails. It encourages many

mountaineers to go to this mountain and get to know its beauty. After the Second World War (1946), the HPD „Kreševo“ branch renewed its work. A year later (1947), the then government temporarily banned the branch as well as other mountaineering societies in Bosnia and Herzegovina. A few years later, the branch changed its name to PD „Bitovnja“ and continued its work. Since 1950, the mountaineering organization has been strengthening and expanding throughout Bosnia and Herzegovina. In the same year, PD „Vranica“ was founded in Fojnica, and in 1952, PD „Pogorelica“ was founded in Kiseljak ^[56]. In the first half of the 60s of the 20th century, members of the mountaineering societies „Bitovnja“ from Kreševo, „Pogorelica“ from Kiseljak and „Vranica“ from Fojnica began extensive work on the restoration (over 70 km) of marked hiking trails that connect the mountains of Bitovnja, Pogorelica, Zec-mountain and Vranica. In 1964, this project was completed and in the month of July, the hiking trail „Bitovnja-Pogorelica-Vranica“ was opened. The purpose of establishing this hiking transversal is to promote the natural beauty of this mountain region, among hikers and tourists, with a unique connection to cultural and historical heritage (museums in Kreševo and Fojnica). Mountain lodges were built in this period: in 1951 on Pogorelica in Suho dol (1220 meters above sea level), in 1952 on Prokosko lake (1640 meters above sea level) and in 1963 on Lopata (1324 meters above sea level). In 1963, the mountaineering event „3. Landing of B&H mountaineers“. In 1991, the mountaineering manifestation „B&H Mountaineer's Day“ was held on Lopata. In the first decade of the 21st century, a mountain lodge was built in the area of Srdivoda (1,680 meters above sea level) at the foot of Rosinj peak, which is managed by PD „Goran“ Gornji Vakuf. In 2002, a mountaineering event marking the jubilee of 110 years of mountaineering in Bosnia and Herzegovina (1892-2002) was held on Lopata. In 2015, from June 13th to 14th, the hiking event „B&H Mountaineers' Day“ was held on Lake Prokoška (1,636 meters above sea level). The organizers are PS Bosnia and Herzegovina, PD „Vranica“ Fojnica and PD „Bitovnja“ Kreševo ^[56].



Source: <https://bracobabic.com/2021/01/29/planinska-grupa-vranica-planinarska-karta/#jp-carousel-4816>, Accessed: June 14, 2025

Fig 76: The Vranica mountain group - a fragment of the hiking map and the winter atmosphere on the Vranica mountain



Source: <https://bracobabic.com/2021/01/29/planinska-grupa-vranica-planinarska-karta/#jp-carousel-4848>,
Accessed: June 14, 2025

Fig 77: Mountain trail „Bitovnja-Pogorelica-Vranica“; in the picture from left to right you can see the peaks of Tikva (1978 meters above sea level), Matorac (1937 meters), Vran kamen (1902 meters), Scit (1949 meters) and Smiljeva



Source: <https://www.youtube.com/watch?v=2KrILDh0FPg>,
Accessed: June 14, 2025

Fig 78: Hiking on Vranica mountain



Source: https://lh5.googleusercontent.com/p/AF1QipP_2QZyG4xvLCzhcKn0n0kRsAA1fmtq3rk9UJ7=h720,
Accessed: June 14, 2025
Source: <https://www.prometej.ba/clanak/ljudi-i-krajevi/kako-sam-prosao-na-svom-planinarenju-po-vranici-2586>
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Fig 79: Left: Pond on Sebesic. Right: One of several minihydroelectric power stations on the Jezerčica river

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