

# **THE KARST PLATEAU OF PADIȘ IN BIHOR MOUNTAINS—ONE OF THE MOST SPECTACULAR TOURIST SITES IN ROMANIA. DESCRIPTION AND DEVELOPMENT POSSIBILITIES AND PROMOTION OF THE „MOȚULUI CHURCH” TOURIST CIRCUIT**

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**Abstract:** The present study dwells on the tourist potential the Karst Plateau Padiș which, by the uniqueness, density and spectacular view of its karst sites and phenomena benefits of a special place in the gallery of the most attractive and original tourist areas in the Romanian and European karst landscape. The given study represents only a part of a larger work, within the first tourist route Biserica Moțului Peak (1466 m) as the central point of attraction, which is an erosion remnant of leveling surface Măguri-Mărișel. By its position in the karst plateau of Padiș, the Biserica Moțului Peak offers a wide perspective view over the whole plateau and the adjacent area. The touristic route also includes emerging karst phenomena as sinking of Gârjoaba River in the underground. The tourists can also notice the results of river bed processes, consisting in the side erosion of the river banks, presence of the meanders, deposits of the eroded materials etc. and formation of the peat soils covered by hydrophilic vegetation. In the end of the presentation there are brought some suggestions on the development of this tourist route, especially on the setting up of a panoramic point on the Biserica Moțului Peak and the touristic promotion of Karst Plateau of Padiș.

**Key words:** surface erosion, platform leveling, meanders, denudation, forest and meadow ecosystem

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## INTRODUCTION

The Karst Plateau of Padiș is situated in the North-West of Romania, the South-Eastern side of Bihor County bordering the counties: Cluj and Alba. From the physical and geographic point of view, the area is situated in the North-Central side of Bihor Mountains. A subunit of the Apuseni Mountains also borders the West the bow of the Romanian Carpathians. Thanks to its numerous reservations and natural monuments, the area has the highest density of Karst phenomena per squared kilometer in Romania. The Karst Plateau of Padiș was included in the Natural Park of Apuseni Mountains on the West-Central side. In the Karst Plateau of Padiș, the Peak of Biserica Moțului (1466m) located in the center, offers multiple valences from a touristic point of view. The Padiș, meaning, „*Light Tower*”, gives an excellent panoramic view of the entire Karst Plateau of Padiș and its surroundings. It also represents a touristic landmark for the tourists adventured on the numerous routes from the Padiș area, being perceivable from very remote places.

These touristic benefits, as well as many other floristic, hydrographical, pedological elements, with real valences, have determined the entrance of Biserica Moțului Peak in the list of preferences for the tourists that visit Padiș area.

## DATA AND METHODS

We used a classical method of research in order to elaborate the present work. References were taken from previous studies of the area. Field work was done in the capacity of site visits during four years. The text was settled to final form in the laboratory.

Many geographic studies were consacrated to the Apuseni Mountains, but for this presentation, only the karst areas from Padiș were selected. The field focused the identification and the description of the most interesting touristic routes. For this purpose, topographic maps being used at a scale of 1:5,000, as well as the touristic maps existing at that moment.

The main tourist sites found on the route were identified, photographed at different periods of the year, in order to catch the landscape under the change imposed by the succession of the four seasons. In the end, solutions were proposed for the arrangement of the touristic sites in order to improve the quality of the touristic act, as well as to promote the splendid area of Padiș.

## DISCUSSIONS AND RESULTS

The present work presents a new touristic route that has not been included in the touristic circuits of any other touristic guide or geographic work up to now (Bleahu, 1974, 1982; Indrieș, 2010). A description of the main touristic objectives and an explanation of the geographic phenomena specific for karst areas should also be included. Also, a proposal regarding tourist development possibilities and promotion of the touristic circuit Biserica Moțului / Moțului Church can be added.

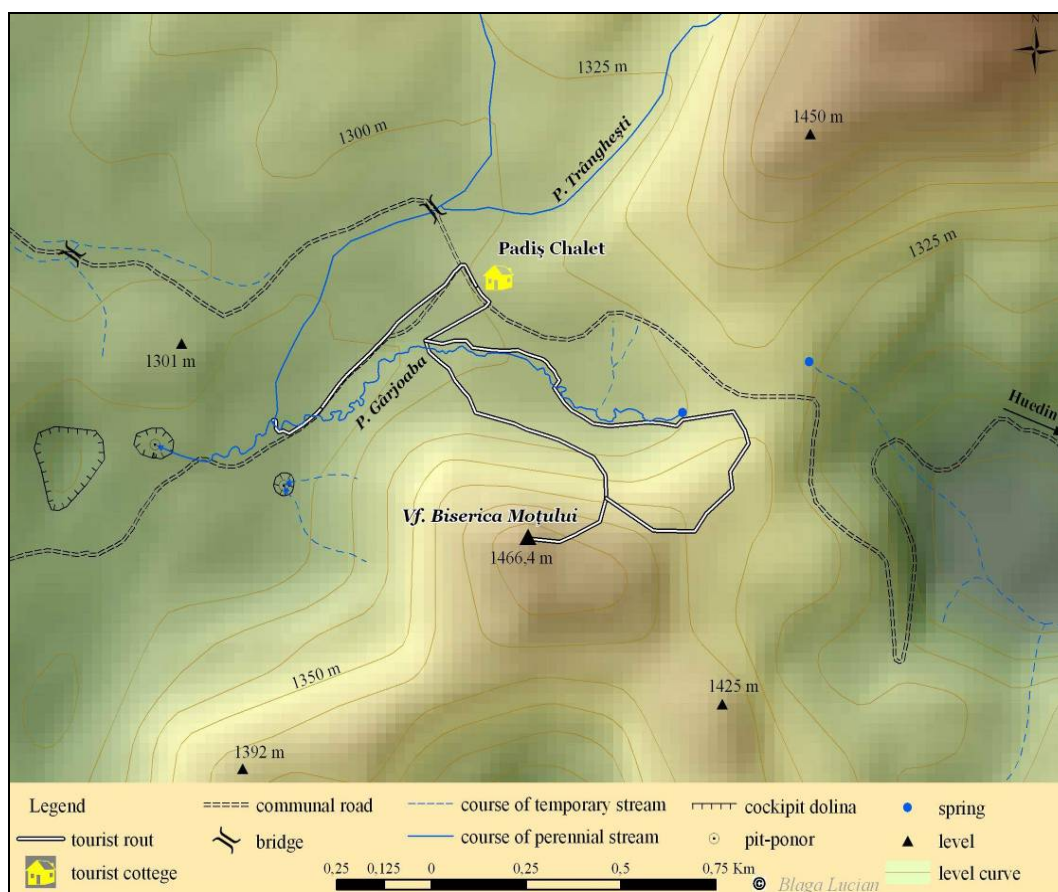
### **Touristic description of the route: Padiș Chalet–The Moțului Church Peak (1466 m) – Gârjoaba River–Padiș Chalet**

Guide marking: unmarked route

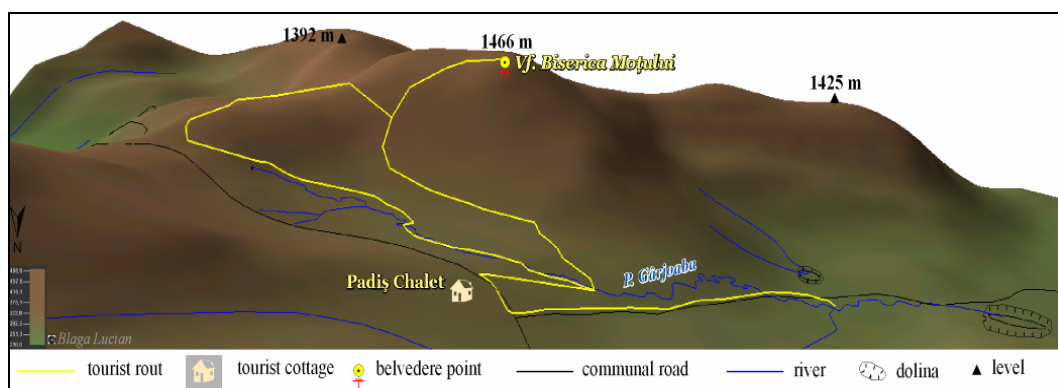
Duration: 2 hours

Necessities for travelling on this route: hydration and food resources, informative and tourist orientation materials (maps, tourist guide etc), elements for body protection (raincoat, sunglasses, sun hat, hydrating creams with ultra-violet protection).

Touristic objectives included on the route: Moțului Church Peak (1466 m), an excellent point for a panoramic view), Gârjoaba River (to observe some geomorphologic and hydrologic processes and phenomena specific to the karst places).



**Figure 1a.** The touristic map of the circuit „Biserica Moțului” / Moțului Church from Karst Plateau Padiș



**Figure 1.b.** The hypsometric map, 3D, of the touristic circuit „Biserica Moțului” / Moțului Church from Karst Plateau Padiș

**The route characteristic:** it is a relatively short and easy route for hiking on the mountain routes and acclimatization. It offers an exceptional view of the Karst

Plateau of Padiș and its surroundings (Oșelul Peak, 1297m; Boghii Peak, 1436m; Vărășoia Peak, 1461m; Măgura Vânăță /Livid Hill Peak, 1475m; Vărășoia Glade; Padiș “Depression”; Cărligatelor Crest with Cornu Muntelui/ Mountain Horn Peak (1627m), Cărligatele (1694 m), Piatra Grăitoare/ Talking Stone (1557 m), Briței (1759 m), Brăieșei (1692 m) and Piatra Tâharului /Thief Stone (1608 m); Valea Bătrâna/ Old Woman Valley and Old Karst Platform/ Bătrâna with Bătrâna Peak (1579m) Peșterii Peak (1509m) and Piciorul Bătrânei/Old Woman’s Leg Peak (1549 m); Gârzii Depression; Lumea Pierdută/ Lost World Plateau, 1200m, Biharia Massif with its peaks: Cucurbăta Mare/ Big Pumpkin (1849 m), Cucurbăta Mică/Little Pumpkin (1769 m); the Ski Paths from Vârtop (Arieșeni); Groapa Ruginoasă / Rubiginous Hole under Țapu/ He-Goat Peak (1475 m) etc.

### **The route description:**

The touristic circuit „*Biserica Moțului*”/ Moțului Church (Figure 1b) is unmarked. There is only an indicator on a column on the left side of the way that connects Padiș to Huedin, in between Padiș Chalet and Brădet Chalet (Figure 2). It indicates only the direction to the „*Biserica Moțului*”/ Moțului Church (1466 m). We are hanging up a little longer in front of the Padiș Chalet to admire and capture with the camera the offered scarped landscape that seems to conceal the steps and the thoughts of all the people that adventured to the top. There are many people who arrive in Padiș, embraced the sky from this so called “*dome of the world*” and taking with them a unique feeling as a souvenir. From the level of the Padiș Chalet (1280m), Moțului Church Peak reveals itself to our sight in all its splendor (Figure 3). This peak overlooks the accommodation bases that we can find on Karst Plateau of Padiș. Disguised by the dark green pine forest that creates a border to the base, the ashen white of the calcareous abrupt is little noticed. Only some parts betray the presence of the great stony bastion.



**Figure 2.** Tourist indicator to Moțului Church



**Figure 3.** Biserica Moțului/  
Moțului Church Peak

The given topographic name of Moțului Church seems to have its origin in its church aspect given by the elongated crest, separating it from Măgura Vânăță Peak through a deep lap (1344m) and which, on the Western side (to the Padiș Chalet) is even more scarpe. On the Eastern side (to Huedin) is more prolonged and at its middle a calcareous ashen-white wall ascends, which in this “*architectural assembly*” takes the shape of a dome, giving the whole creation of Moțului Church Peak the “*church*” aspect. Upside the scarped landscape a little wooden “*church*”, covered with metal sheet was built, serving as a shelter for tourists found on their way to this peak, protecting them



from the rough weather conditions. The shelter was sanctified by priests so that the physical protection can join a divine and spiritual protection. In these conditions, the topographic name receives a new meaning.

After admiring the greatness of the scarped mountain from the altitude of Padiș Chalet, we start our journey from here (Figure 4) on the main road to Huedin. After some other dozens of metres we leave the main road right in the curve where this one turns left. We go around the chalet immediately on the right and down about 200-300 metres parallel to its fence. After that we turn left to pass over the Gârjoaba River. On the other side of the river we can identify a path (Figure 5) a bit difficult to notice through the thick grass that covers the glacial block going like a border to the base of Biserica Moșului Peak. We easily ascend on this path with spruce wood on each side up to the Biserica Moșului Peak. After 5 minutes of continuous climbing, we reach a deforested, abundantly weeded and at some point boggy area. In areas that have less incline and therefore lack drainage, there are spruce wood on the side. We can then identify a path, firstly not too easy to notice, but is easily noted on the left in Huedin direction (Figure 7). We are heading on this path in an easy, comfortable, climb while we can admiring a side of Măgura Vânăță Peak. We can also see the connection between this peak and Biserica Moșului Peak, the origin of the River Gârjoaba, and beyond we can also see Karst Platform Bătrâna.



**Figure 4.** The Padiș Chalet the leaving point



**Figure 5.** The path getting up to the peak



**Figure 6.** The spruce wood side



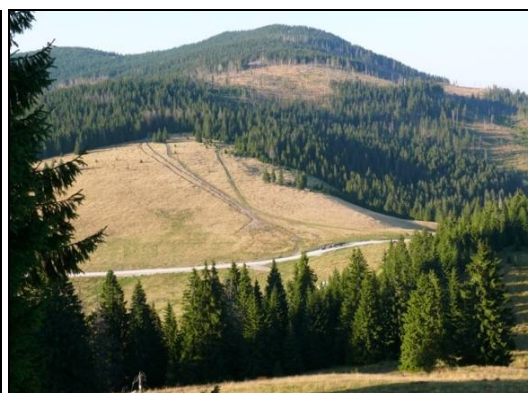
**Figure 7.** A path getting to the wood side

After other 5 minutes, we are climbing an inclined and scraped area. We passthrough the sleazy spruce forest (Figure 8) on the left, heading to Huedin. Beyond this is the Măgura Vânăță Peak (1641 m) (Figure 9). After some other 5 minutes we begin the incline, leaving gradually behind Măgura Vânăță Peak. In this area the route is quite scraped (Figure 10), which is why we suggest a good effort in renovation in order to give the climbing a more pleasant aspect. We can notice at each stop how a new element completes the landscape sight, making it more diversified and offering it unthinkable valences once on top.

On the rich in grass meadow around us, we can often admire dozen of horses grazing the thick and tall grass (Figure 11). It is one of those moments when we feel like grabbing the camera and immortalizing the sight, by taking some photos with these gorgeous animals that bring life and special charm for the area of Padiș.



**Figure 8.** Part of the route with sleazy spruce forest



**Figure. 9.** The way to Huedin grafted by transpassing Măgura Vânăță Peak and Biserica Moțului Peak



**Figure 10.** Part of the route with scraped area



**Figure 11.** Horses grazing on the northern side of Biserica Moțului Peak

The scraped acclivity takes about 10 minutes of climbing, after which the path ramifies and we are going to pass on the right (Figure 12) to get to Biserica Moțului Peak. The other path on the left, we take on out way back. The reason for this is because this one is heading to the second route target, Gârjoaba River. We are moving on to the



right on the path where the route is heading across a forest. We pass among fallen trees and fixed limestone bricks. These bricks were removed either through the mechanic action of the roots that continuously expand in their natural desire to remain vertical and perforate the thin soil or the cracks. It is also possible that the clefts were produced by external agents or due to the limestone dissolution because of the rain water that infiltrates the cracks already created. The final reason could be due to an amalgam of natural agents that we are not going to insist upon in here. After some other 5 minutes of demanding effort and scraped acclivity, we come to a fork of paths again and again we keep our way on the right. The other part heading to the same point Biserica Moțului Peak which takes another 2 minutes.



**Figure 12.** The first route ramification on the right, on the way to Biserica Moțului Peak



**Figure 13.** The „little church” from Biserica Moțului Peak (1466 m)



**Figure 14.** Icons suspended on the inside walls of the „little church”



**Figure 15.** Tourists exposed to the danger of collapsing in the open

Once arrived on the Biserica Moțului Peak (1466 meters), after a route of about 35 minutes, we stop at the Christian shelter (Figure 13). Behaving as good Christians, we try to act appropriately at a sacred place where God can comfort our soul. Inside the “little church” tourists brought holy icons hallowed by priests. These icons give the shelter a religious aspect any other sacred place would also have. Unlike other tourists we will try not to leave our negative mark by writing or carving our names on the shelter’s wood.

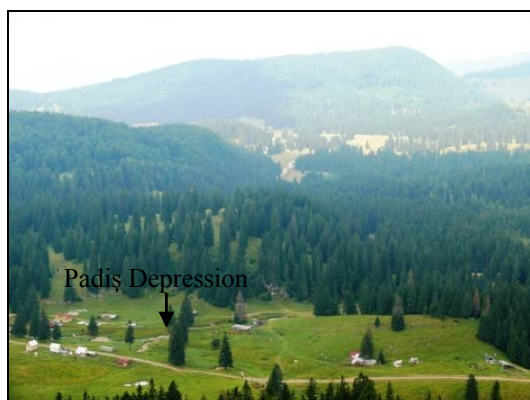
Behind the shelter, there is a table and a bench that we use to rest and serve our food. This site is found at the edge of the mountain near a red pole. This pole is a warning sign for tourists who may want to sit on the table that the table is not stable and thus not suited for sitting. In fact, there is a young man whose photo resides in the basement of the shelter joined by bouquets of flowers as a memorial for his loved ones.



**Figure 16.** Karst Plateau of Padiș



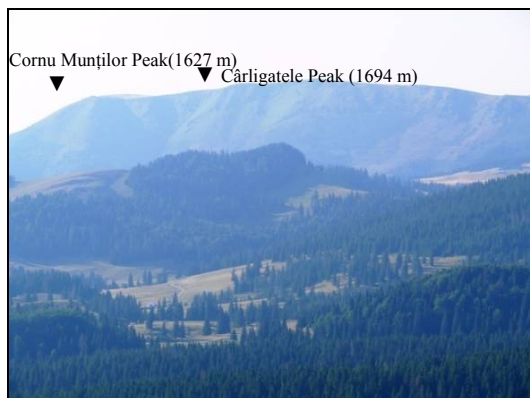
**Figure 17.** The looping course of Gârjoaba River



**Figure 18.** Padiș Depression



**Figure 19.** Vărășoia Glade



**Figure 20.** Cărligatelor Peak



**Figure 21.** Măgura Vânăță / Livid Hill Peak



After resting for a while and hydrating altogether, we turn to the face of Padiș Plateau. Using the map and other information such as images from the future tourist guide, we try to identify all the aspects in the field. In front of our eyes, there is a great view. We can see in our immediate proximity the Karst Plateau of Padiș (Figure 16) with places for accommodation, the looped streams of Gârjoaba and Trânghiești Rivers, the sheepfolds and numerous small kettles that „perforate” the plateau. Some of the small kettles are full of water and some populated with spruce. In the North-Eastern side of the Karst Plateau it is the Padiș „Platform” (Figure 18), that is bordered on the west by Boghii Peak (1436 m) and Oșelul Peak (1297 m). This platform continues on the North with Vărășoaia Glade that is dominated closely by Vărășoaia Peak (1461m) (Figure 19). All of these peaks are situated at 1200-1400m. On the horizon is the Cârligatelor Crest which has a „wall” aspect which is broken on the West by some torrents. This break allows us to see the round shaped cupola of some peaks: Cornu Munților Peak (1627 m), Cârligatele Peak (1694 m) and Șaua Cumpănățelul Peak (1650 m) (Figure 20). To the East the wooded crest of Măgura Vânăță (Figure 21) imposes in the landscape by its huge and massive aspect marked at its turn by some other pyramidal peaks, from which Măgura Mare Peak (1641 m) is culminating.

Presently, the relief of the karst plateau has a succession and depressions situated at an average altitude of 1200 m. At the peak, it reaches 1400 m in average. The relief also has a long history. The story started 200 millions of years ago, when this space was covered by the waters of Tethys Sea (Tethys—the Sea Goddess in Greek mythology). In fact it covered the entire Alpine-Himalayan geosynclines area hence, the name Carpathian Mountains. The present relief is the result of many sedimentation periods, orogenetic and epirogenetic in alternation that began in medium Cretaceous (the alpine orogenesis). In this way, after long periods of sedimentation (dozens of millions of years), the folding and lifting of sediments was produced. After that, the mountain, overpowered by the modeler force of the external agents, was eroded up to the base and transformed it in a pediplain. Later on, in other periods, this one was lifted again and fragmentized. Today, it presents the aspect of a plateau with altitude appropriate for a leveling surface from Fărcașa-Cârligați. Cârligatelor Peak corresponds to this superior level, situated at 1600-1800 m, its carving being produced in about 30 millions of years. From its surface, the plain has some erosion remnants and a dome aspect, respectively: Cornu Muntelui (1627 m), Cârligatele (1694), Brăiești (1692 m) and Briței (1759 m) Peaks. This indicates the initial erosion level was up to where this platform used to be and presently is situated at an average altitude of 1600m. After this first leveling stage, it is followed many other phases of ground subsidence including, deposits of sediments, folding, lifting and erosion processes, that drove in the end to the carving of the second leveling surface (Măguri-Mărișel), named in the area the Karst Plain of Padiș, situated at an altitude of 1200-1400m. This plain is very well noticed in Padiș Plateau, the Padiș “Depression” and in Poiana Vărășoaia (Figure 22), all these subunits being situated at an average altitude of 1200 m. The leveling surface is not completely plain, but rather fragmentized by the numerous kettles and rivers. The most visible spots from this point, is Trânghiești and Gârjoaba Rivers in between the Padiș Chalet. After 100m and carving some loops is the point where both rivers unify. The Karst Plain of Padiș is closely dominated by Măgura Vânăță (1641 m), Boghii (1436 m), Oșelul (1297 m) and Vărășoaia (1641 m) Peaks, which are nothing else but erosion remnants of the initial level of this leveling surface. Situated at 1400m, these peaks stand at an altitude of 1200m after denudations and intensive accumulation (Bleahu, 1976; Cocean, 2000; Mezaroș, 1994; Mutihac, 1973; Onac, 2000, Tufescu, 1996).



**Figure 22.** Padiș Karst Plain and Fărcașa-Cârligați levelling surface

An interesting aspect to note at this altitude is the vegetation of this karst plateau. Respectively, Poiana Vărășoia, Padiș „Depression” and Padiș Plateau, the forest was replaced by the mountain plains because of aridity and mostly because of intensive deforestation processes. It is obvious that a reversal of the vegetation levels, the spruce level being under the beech level. The phenomenon being explained by the frequent thermal inversions, specific to closed depressions and can be seen the best in autumn because of the specific chromatic scale (the broadleaf forest situated upper than the green pine forest) on Boghii (1436 m) and Oșelul (1297 m) Versants.



**Figure 23.** Specific flora aspects



**Figure 24.** Rowan tree

Beside the beautiful sight, Biserica Moțului Peak presents some other attractions as the spruce forest „hanging on” the white limestone of the abrupt. These

sharpened crests looking from an upper level seems to emerge from nowhere. Near the shelter the lively coloured flowers (Figure 23) and some rowan trees with their intense red fruits (Figure 24) introduce a note of discordance for the dark green landscape of the spruce forest. In fact, Biserica Moțului Peak was declared mixed natural reservation, with the purpose to protect and conserve both forest and meadow elements with some floristic rarities.

In order to support the tourist act and to richly valorize the tourist valences of this point of beautiful panoramic view a number of improvements are requested as for instance: the construction of a balustrade to prevent the danger of falling down in the open, the creation of a balcony in order to have a wider view upon the touristic spots, increasing in this way the degree of comfort and security, the location of some touristic posters with pieces of information regarding the spots to be seen from that point, protected flora and fauna species posters; the replacement of the old furniture from the resting area (table, bench).



**Figure 25.** Sleazy forest with dried spruce firs



**Figure 26.** Raspberry canes



**Figure 27.** Grazing horses



**Figure 28.** Path to the Glade

After closing this horizon tour, for which we anticipate about 30-40 minutes, we continue our route, coming back on the same path we have taken before. At the second fork of ways (described earlier) that is to be found in an opening with some dried spruce, some of them downfallen, some still up (Figure 25), we take a break. We are resting here for a while to enjoy the abundance of raspberry we can find in this area (Figure 26) and to



admire once more the horses grazing usually on the glade (Figure 27). We won't be going down but we take the path from the right side (Figure 28), we climb up some other meters and we get into a glade from which an excellent view is opening in front of us over the Southern side from Padiș area till the highest height of Bihor Mountains and Apuseni Mountains and the general area of Cucurbăta Mare Peak (1848 m).



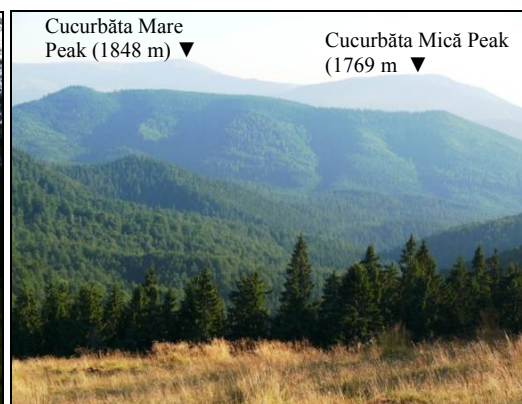
**Figure 29.** Views from the glade



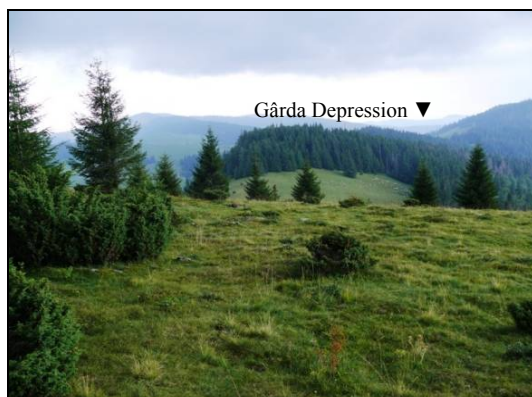
**Figure 30.** Subalpine vegetation, the juniper



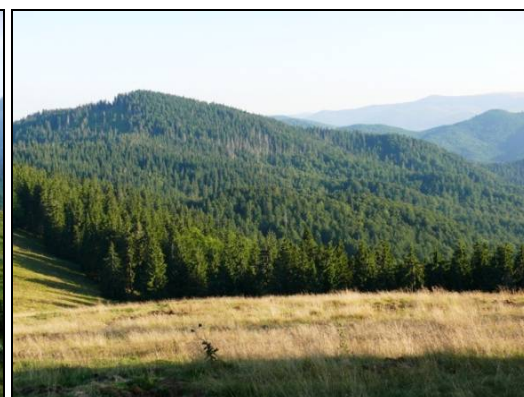
**Figure 31.** Țapu Massif and Rubiginous Hole



**Figure 32.** Biharia Massif (in the remote plan)



**Figure 33.** Panoramic view to Gârda Depression



**Figure 34.** Gârdișoara Peak (1476 m)

Once arrived in the glade (Figure 29) we admire first the juniper fruits (Figure 30). Then, having the map and the guide at hand we orient ourselves in order to identify our grounded objectives in the Southern side of the Karst Plateau of Padiș. From the right to the left we can see: Massif Țapu (1475 m), with the huge hole called Groapa Ruginoasă (Figure 31), the ski sliding path from Arieșeni, Biharia Massif cu Cucurbăta Mare Peak (1848 m) (easy to distinguish because of the TV relay), Cucurbăta Mică Peak (1769 m) and Piatra Grăitoare / Talking Stone Peak (1658 m) (Figure 32), under which in a nearby cadre, we can notice a succession of crests well wooded, and beyond them the Karst Complex Cetățile Ponorului/The Ponor Fortresses and Karst Plateau Lumea Pierdută /The Lost World, a little bit on the left we can see Gârdei Depression (Figure 33), closed to the west by Gârdișoara Peak (1476 m), (Figure 34), to the South-West by Gârda Peak (1459 m) and to the East by Bătrâna Peak/Old Woman Peak (1579 m) (Figure 35) continuing to the North with Piciorul Bătrânei Peak/The Old Woman's Leg Peak (1549 m). Continuing to the North with Peșterii Peak/Grote Peak (1509 m) and furtherer to the North with Piciorul Bătrânei Peak/the Old Woman's Leg Peak (1549 m), deeply affected by the deforestation processes from the last years (Figure 36). If we look carefully we can notice from this place an easy rippled surface and an underground stream itinerary (Bleahu, 1981). We are about to close the second horizon tour offered by Biserica Moțului Peak over the southern side of the Karst Plateau of Padiș and its surroundings. The needed time for this being 15 minutes, after which we continue our rout to the Gârjoaba River, to which we are about to arrive in other 10 minutes.



**Figure 35.** Bătrâna / Old Woman Peak



**Figure 36.** Peșterii / Grotte Peak (in the closed by plan) and Piciorul Bătrânei/ Old Woman's Leg Peak (in the remote plan)

We are coming down on a path from the glade, near by the wood side from our left, settled on the road to Huedin (Figure 37) and after 5 minutes of descending we are getting again in a forested area (Figure 38). After leaving on our right two isolated spruce firs, we identify a stony path that continues on the right (Figure 39). We must be very careful on this path as the stones are slippery when the weather is wet and there is mud on them. After a few minutes we come up into an opening, where we can see a green painted house (Figure 40), below which Gârjoaba River springs.

We are going to avoid the green house from our right and go down on a parallel way to the road heading to Huedin. After a few hundreds of meters, we identify the Spring of Gârjoaba River, found in the proximity of a clump of spruce firs, the river being partially trapped (Figure 41). From Biserica Moțului Peak we have been walking



for 30-35 minutes up to here, and since we left Padiș Chalet we have walked on this route for 1 h and 20 minutes. This is including resting periods and time to observe the landscape from the two spots of panoramic view—belvedere.



**Figure 37.** The road to Huedin



**Figure 38.** In the way to the spruce forest



**Figure 39.** The stony path hardly noticeable in the forest



**Figure 40.** In the way to „green house”

From the spring, situated at the connection point of the two crests Măgura Vânăță and Biserica Moșului, we continue our journey along the river. We avoid the river from the left, where it flows down along with the meadow area (Figure 42) found below its spring. An area with numerous meanders approaches (Figure 43). It has a concave border from which the river bites roughly (Figure 44) and a convex one where the erosion results are deposited (Figure 45). There are also areas with ruined borders because of the lateral erosion (Figure 46), the peat soils where the hydrophilic vegetation emerged (bulrush, moss, sward grass and so on). All these geographic phenomena and processes being the results of a reduced inclination of the land. At the same time, when the waters are big, the river is getting such a big force of erosion that the borders are weathered, even annihilated and the erosion results are deposited in the part of the river in which the transport capacity decreases. The reduced land inclination also allows the water stagnation, which dissolute and spoils the limestone, transforming it in an impermeable argil, from which the peat soil is formed, an infertile soil because of its great acidity.





**Figure 41.** Gârjoaba River Spring



**Figure 42.** Boggy land below the spring



**Figure 43.** A meander formed by Gârjoaba River



**Figure 44.** Eroded border



**Figure 45.** Convex border, with gravel deposits



**Figure 46.** Annihilated border

After another 10 minutes from the spring we get in a more humid area. The vegetation of forest is also visible here. We continue on our route by the stream to observe the extraordinary force of erosion of this insignificant river, taking into account its debit for normal conditions. We can see both its bites in the tougher rocks, its deep carving in the versant (Figure 47) and the thin soil blanket. This is characteristic of the



mountain (20-30 centimetres) (Figure 48) where the spruce firs are digging their roots with tentacles (Figure 49), a fact that explains the lack of stability of pine forest. During the powerful storms, this tress falls down like dominos. We pass over the river and we continue our way on the river right side. Here, we see the turf moor places, hydrophilic vegetation and the spruce firs roots with tentacles fallen down because of their own weight. The powerful wind and the thin soil (Figure 50) is unable to support any well fixed roots. Five minutes after entering in the forest, we get in front of Padiș Chalet. From the Biserica Moțului Peak till here we have been walking for 45-50 minutes. Since we began the route we have been hiking for an hour and 30 minutes. From here we move on the border of the river to see how this one loses its water in the stones that it would carry before discharging itself in Trânghiești River. We get to the point of Gârjoaba River water catchment from underground; we can enjoy our sight following the sinusoidal stream of Gârjoaba River, looping at the base of Biserica Moțului Abrupt. In this sector on the both sides of the minor riverbed, the surface is plain, good for camping but still not equipped for this purpose. Here Padiș tourists camp, preferring this kind of accommodation. The vegetation from this area is either destroyed because of placing the grate directly on the soil or it suffers a modification in its vegetal composition. For this reason, we recommend camping in forbidden and not equipped places (Figure 51). Down from here, Gârjoaba River makes a loop on the right, strongly eroding its left border (Figure 52). This river passes over the road and confluent with Trânghiești River.



**Figure 47.** Carved border in the versant rock



**Figure 48.** Thin soil



**Figure 49.** Spruce firs perforating the thin blanket of soil



**Figure 50.** Fallen spruce firs due to the powerful wind and the thin soil



**Figure 51.** Vegetation carpet damaged by the touristic exploitation



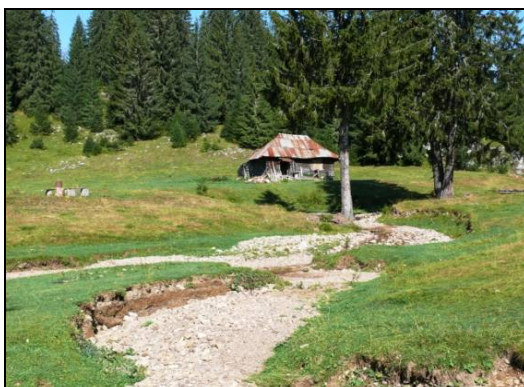
**Figure 52.** A strongly eroded border

On the left side of the road, near the eroded border, we can see how the river water is captured underground through some sink holes that are not morphologically differentiated. These holes are found in the stage of diffusive capture (Figure 53). Thanks to the temporary character of dripping, the sink holes of Gârjoaba River are activated only in the rich in rain periods. This happens when the water infiltrates through the gravel of the riverbed. When the depth is great, the sink holes cannot drain all of the water underground. The Trânghiești River loses its water in the sink holes situated at the base of a collapsing kettle (Bleahu, 1981; Cocean, 2000).

After seeing the confluence of Gârjoaba River and Trânghiești River (Figure 54) or according to the situation, the water lost in its own riverbed we come back to Padiș Chalet on the forest way that makes the connection in between Padiș and Glăvoi. On our right is the Biserica Moțului Peak. From here till Padiș Chalet it takes 10-15 minutes of walking but we still can lose a few minutes to enjoy the tasteful cheese or forest fruit pies (Figure 56), jams and natural juices offered for selling by the temporary population from Padiș. This is the kind of feast a tourist can look forward to once they arrive on the plateau and looking for some rest.



**Figure 53.** Gârjoaba River Sink holes



**Figure 54.** The confluence of Gârjoaba River with Trânghiești River

### **Tourism development and promotion possibilities for „Biserica Moțului” touristic circuit**

The tourist route presented in here has the main attractions of Biserica Moțului Peak (1446m) and Gârjoaba River. It does not have any touristic arrangements other



than “*the little church*” found on the top of this peak. This church can serve as a shelter for the tourists, in case of storms, raining etc. In order to valorize efficiently the touristic resources presented in this article, it is requested at least the route equipment, as well as an improvement of the paths to the touristic attractions that can be seen on this route. In order to do this, we consider necessary the placement of some informative touristic posters, the arrangement of Biserica Moțului Peak as a point of beautiful sight as well as marking this route are aspects highly requested to improve the tourist ambiance and to promote the whole karst plateau areal of Padiș (Ilieș, 2007). We also suggest an arrangement of some selling points for the alimentary products: pies, cheese, milk, different kinds of comfiture or jam, forest fruit syrup, etc. Presently these products are commercialized by the temporary inhabitants from Padiș but they respect only partially the hygienic norms. These products are 100% ecological because they are obtained in the area of Apuseni National Park that has no polluting agents. In order to valorize better these products and to help at their quality recognition and least but not last to put the consumer security as a priority, we suggest their commercialization under the brand of PNA (Romanian acronyms for Apuseni National Park).



**Figure 55.** Biserica Moțului/ Moțului Church Peak (1466 m)



**Figure 56.** Gastronomic feasts from Padiș

### Conclusions:

After making this analysis, the following conclusions can be made:

a) The inclusion of „*Biserica Moțului*” touristic circuit in the map of touristic routes from Padiș is very indicated (even if this one remains unmarked) because:

- it allows good touristic accommodations and acclimatization;
- it offers a wide panoramic view over Karst Padiș Plateau;
- it represents a landmark for the tourists, being noticeable from long distances, hence the name „*Padiș Light Tower*”;
- it offers to the tourists a real geomorphologic lesson because they can observe in the field the leveling surfaces, the erosion remnants, glacis, abrupt areas, meander, sorbs etc, as well as a bio-geographic and meteorological lesson because from this point they can notice the vegetation reversals from Padiș “*Depression*”, “*Padiș*” fogginess, different kinds and types of clouds, and many others.

b) We recommend a demarcation and improvement for the proposed touristic route with:

- signs, indicators and informational touristic posters, containing information about its relief, its panoramic view points/ belvedere, its flora and fauna, etc.;

- the creation of a poster containing panoramic images in order to highlight the touristic sites perceivable from Biserica Moșului Peak;
- a balustrade and a balcony construction to prevent the danger of falling down in the open, respectively to increase visibility and comfort while admiring the landscape;
- c) an arrangement of some selling points for the commercialization of the ecological alimentary products: pies, cheese, milk, different kinds of comfiture or jam, forest fruit syrup, etc, obtained in the area of Apuseni National Park under the brand of PNA (Romanian acronyms for Apuseni National Park), in order to be easily recognized and valorized, as well as for the consumers' security;
- d) In order to valorize and promote better the Karst Plateau of Padiș and give it a touristic prestige, it is requested the improvement of accommodation system as well as a touristic qualification of the personnel involved in the touristic services, including and not limited to making hospitality an essential condition.

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