

THE RUPESTRIAN PLACES OF ALUNIȘU – POSSIBLE TOURISM GEOMORPHOLOGICAL SITES

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ABSTRACT. – **The Rupestrian Places of Alunișu – Possible Tourism Geomorphological Sites.** The existence of sandstones on very large areas in this region, corroborated with the fact that it appears in daylight in many places, has allowed man to make it profitable. The Kliwa sandstones specific to this area have been used in two different ways: firstly in a traditional manner, where the rock is used as a construction material and secondly, shaping it in situ. The friability of the sandstone deposits and the moderate compaction degree has enabled man to mould it even in a rudimentary manner specific to the Paleolithic or the Neolithic era. During the Middle Ages, on the background of the religious and political strains, a rather religious use of these places is recorded, also sustained by the climate and the morphology of the region. The low erosion rate, the isolation and a very difficult access have allowed great preservation in time and their turning into historical sites of great value. The anthropogenic factor completes, by its presence and by the activities deployed in the perimeter of this archaeological site, the matrix of interactions between the physical and the environment made human in this way; man has changed the structure and the function of some of these religious places (churches and others) from the sandstone deposits, and this fact enabled us to identify the evolution of this site by geomorphological criteria, a process simultaneous with the historical research. Due to the anthropogenic influence and the natural one, these geosites have gained a scientific, social, cultural, economic and tourism value as well as other additional values, which have turned them into geomorphosites.

Keywords: *geomorphosite, the Kliwa tile, geomorphological characteristics, amenities, religion.*

1. INTRODUCTION

The region with the rupestrian places is located in the central-northern region of Buzău Subcarpathians. It may be taken as a quadrangle having Mount Ivănețu as the northern side, the West side along the village of Alunișu, the eastern side passing through the villages of Găvanele and Fișici and the southern side including the villages of Văvălucile and Scăieni (fig. 1). Located on the territory of Buzău County, the studied area is known as the area of rupestrian places of Alunișu – Nucu – Fișici – Ruginoasa. From the administrative point of view, they are part of the territory of Colți, Bozioru and Brăiești communes (fig. 2). From the point of view of tourism, they are perhaps the most important

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objectives in Buzău County. There are churches carved in the blocks of sandstone, which appear on the surface as erosion witnesses, many of them being former cult locations and serving throughout the time as places of shelter and tabernacles.

Their number is impressive as they are around 30, having different sizes and meanings (fig. 3). The zone is remarkably wild and large, and most of the time markings and maps are useless in the absence of a local guide. They are located on the slopes of the hills or on the valley bottoms, rather far away from one another, in areas with variable accessibility.

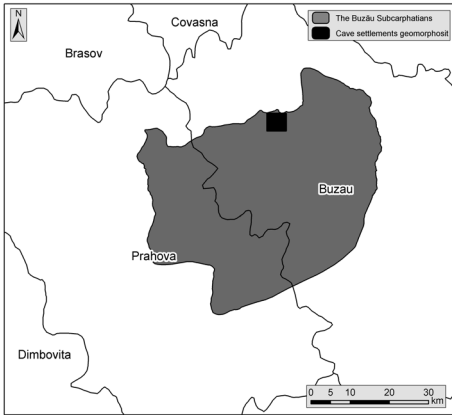


Fig. 1. Cave settlements – location in Buzău Subcarpathians.



Fig. 2. Piatra Îngăurită.

2. GEOLOGY OF THE AREA

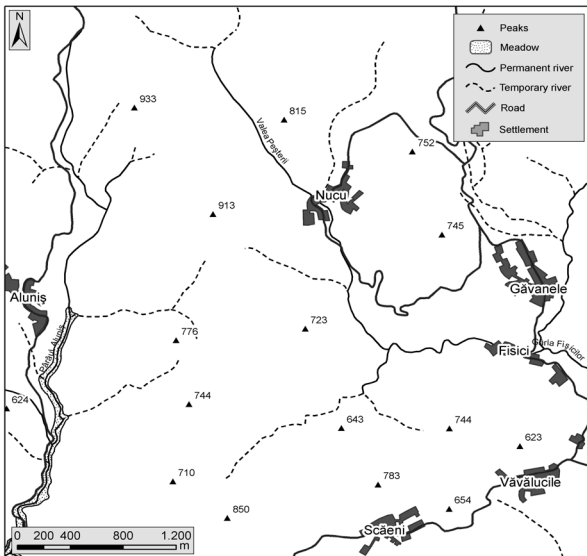


Fig. 3. Cave settlements – location.

The studied area is located at the contact with Ivănețu Mountain. It consists mostly of Paleogene flysch, and the area of the spring basins contains strata of the lower Miocene. The structure of the zone, of complex sediments having different thicknesses and extensions and resistant to the external factors has favored the selective transformation of the slopes by different processes on small spaces (*Geografia României*, IV, page 293).

From the morpho-structural point of view, Buzău Subcarpathians are divided into three zones (L. Badea, Gh.Niculescu, 1964): the monoclinal Levantine-Quaternary zone (at the exterior); the morphostructural pliocene (in the central area); the strongly faulted mio-pliocene zone (on the interior). The studied area is part of the morphostructural mio-pliocene area. Studying the geological map (Ioana Pană, 1966, scale 1:100000), more precisely the structure of Buzău Subcarpathians, the following conclusions have been drawn with respect to the studied zone (fig. 4):

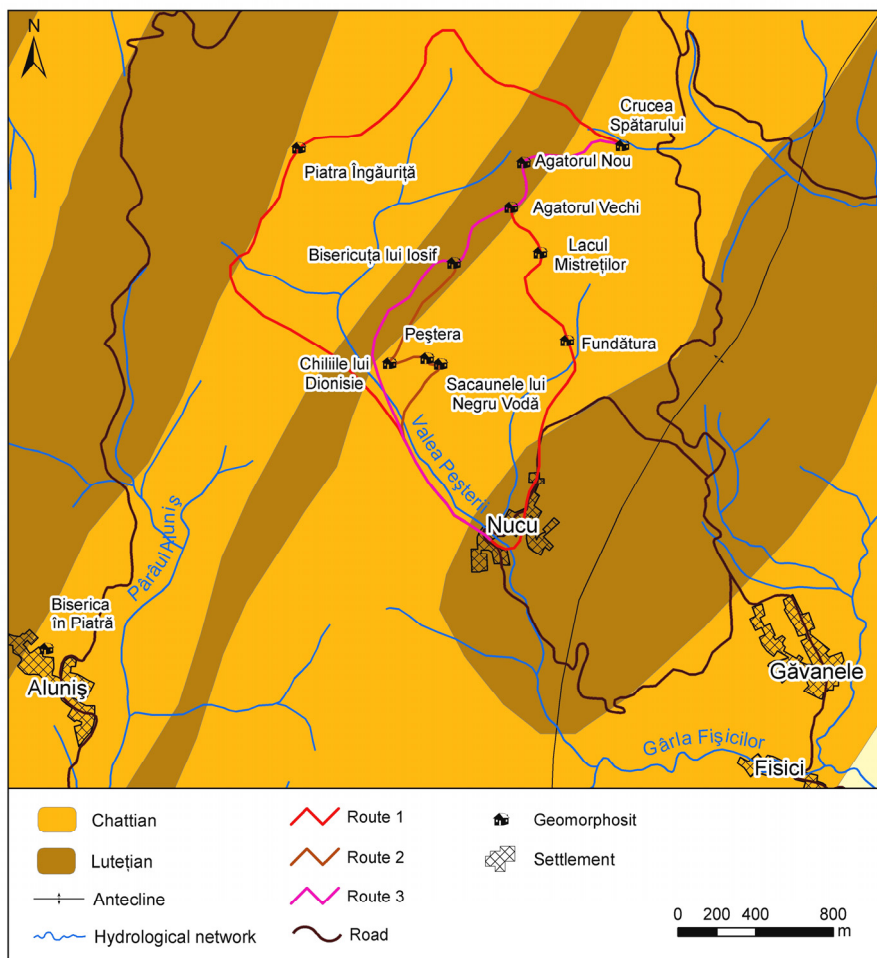


Fig. 4. Geological sketch - cave settlements.

- the oldest strata are composed of the Paleogene flysch, located in the Northern Subcarpathians, at the contact with the mountain area. They are represented by rough sandstones having Paleocene-Eocene age. In this area there are also Oligocene deposits composed of Kliwa sandstone, silicious, disodile and menilite sands. In the Burdusoiaia peak there are diatomites and along the Văvălucile-Brăești depression there is a long discontinuous strip of saccharoid plaster stones, sandstones and clays of Aquitanian age;

- the Helvetian deposits are made of deciduous marl, argillaceous sands and sands;
- the Badenian deposits appear in the depression areas, influenced by the mass displacement processes. They are composed of tuffaceous marls, argillaceous marls and sand marls;
- the Sarmatian deposits are located in the area of high hills. The lower Sarmatian is made of concretion sandstones, weakly cemented raw sands, intercalated with clays; the Middle and Upper Sarmatian is represented by gritty sands altering with the packs of marls and clays.

3. GEOMORPHOLOGICAL CHARACTERISTICS

The region has been under constant raising and faulting movements of great amplitude and intensity. The erosion has taken place differently, revealing the structure of the landforms.

From the altitude point of view, the area is higher in the northern side, having a maximum of 933 m. In the South it reaches a height of over 620 m, while the minimum height is 405 m (fig. 5).

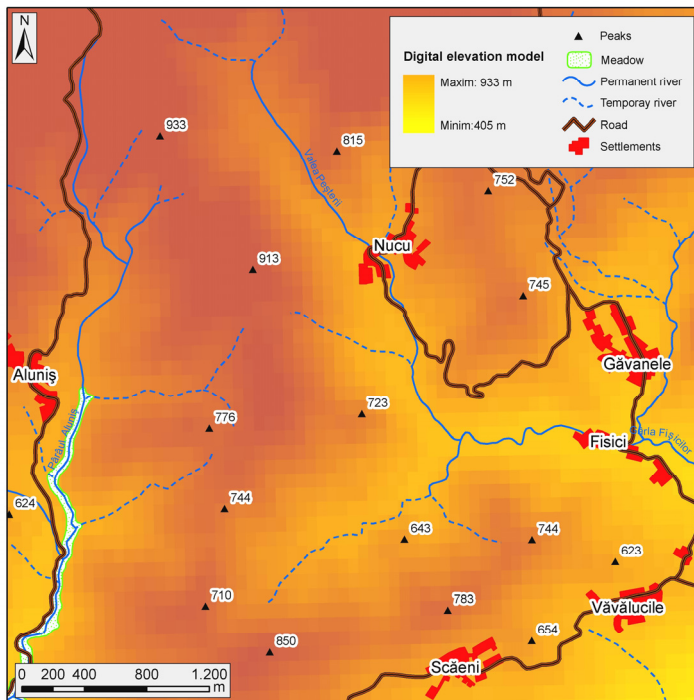


Fig. 5. Hypsometric map.

If the northern side of the Ivănețu slope is fragmented, the Southern side of the contact with the studied area is marked by the presence of disolidic schists at the basis of Kliwa sandstones.

They have led to landslides, accelerating thus the evolution of the eroded slopes of the larger valleys into local depressions where human settlements have been built: Ruginoasa, Nucu, Aluniș, Fișici, Găvanele, Văvălucile and Scăeni.

The area is crossed by numerous brooks or temporary streams which have a strong impact on the land-

form transformation. The rupestrian sites are located in the area of the large rivers.

The prevalent rocks are sandstones and clayish marls. They form facieses oriented towards North-East – South-West.



Fig. 6. Schitul Fundătura.

studied perimeter there are petrographic facieses present that show local differences related to the thickness of layers, massiveness, homogeneity, permeability and solubility (fig. 7).

Two lithological types are dominant in the studied area:

- Landforms developed on clayish marl and Kliwa sandstones. The slopes have an active dynamics with processes of sliding and flowing;
- Landforms developed on weakly fortified sands and talus, in the South of the region where the concretions and the rolls are located.

From the point of view of the structure, the area is an anticline with numerous cuestas, structural basins and

The eocene sandstones are found in the area of Colți - Alunișu, disposed in narrow layers (they are curvi-cortical sandstones and green sandstones). The layers of Oligocene rocks alternate with the Eocene ones. They cover a large area and have a complex lithology.

The Kliwa sandstones are characteristic for the area. Their presence on the upper part of the hills has contributed to the maintenance of the altitude and the emergence of the rupestrian places.

The sandstone intercalations have revealed the complex morphological structure. The southern part of the region belongs to Neogene (fig. 6).

The petrographic relief is remarkable due to both structural and lithological structures. In the



Fig. 7. Agatonu Nou.

synclinal zones in the South. The deepening of the generation of rivers led to the formation of basins, secondary cuestas and to erosion.

The region is subject to some geomorphological processes of small intensity. The gravitational processes are extremely frequent in the studied area (fig. 8). The landslides are frequent both in the area of the large rivers and on the slopes.

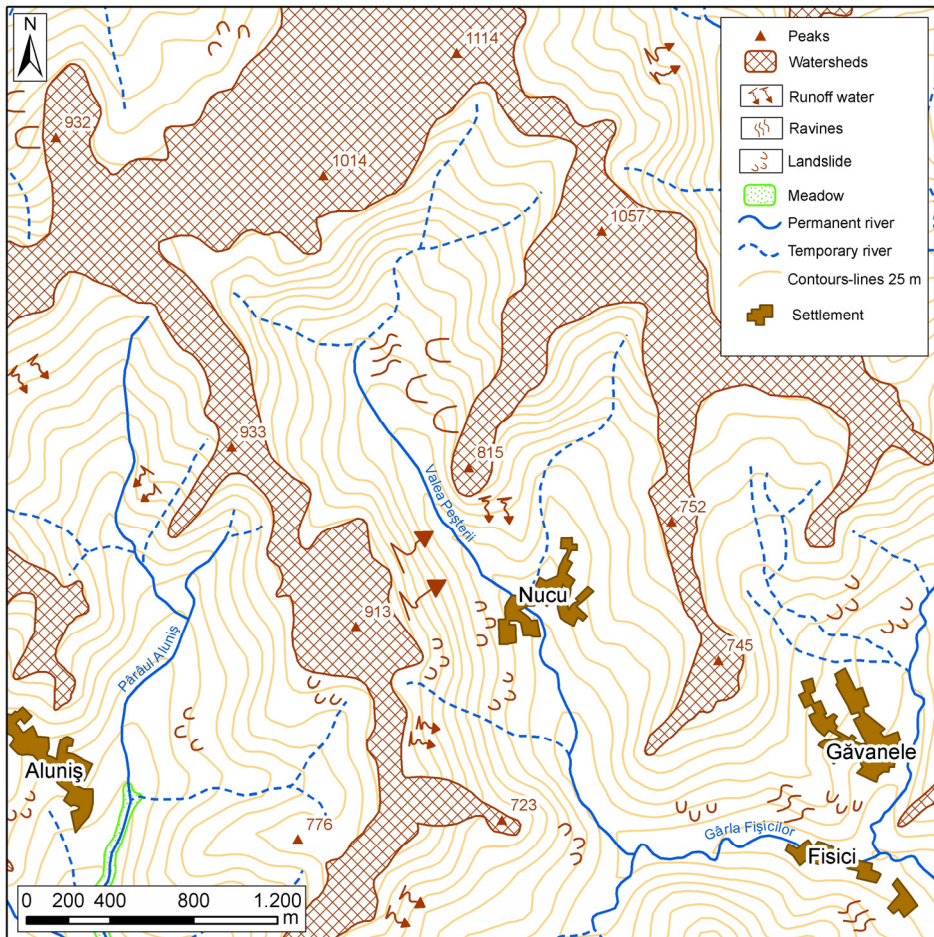


Fig. 8. Cave settlements – geomorphological sketch.

The superficial slides and the valley slides are predominant.

In the superficial slides the thickness of the sliding material reaches 1.5 m. They are the most frequent and are located in various conditions – on old sliding waves, in concave portions with excessive humidity or in the convex sectors of the slope with high inclination. They have small sizes, lengths of several tens of meters and widths from 5 to 15 meters.

The displaced material is arranged in beds and steps. By increasing the amount of water they may turn into superficial flowing slides and then into superficial mud flows.

The middle and large depth slides transport deposits having a thickness between 2 and 10 m or larger than 10 m. The valley slides (900 to 1500 m long and 40 to 50 m wide) are in this category. They are mostly fixed.

The most frequent are the flowing and the ravening processes. The flowing is a widespread process in the South of the region, favored by the presence of the clayish marl, clayish and clayish-sandy facies. Ravening takes place on smaller areas, especially in the contact zone with the brooks.

4. FROM GEOSITES TO GEOMORPHOSITES

The existence of sandstones on very large areas in this region, corroborated with the fact that it appears in daylight in many places, has allowed man to make it profitable. In this case, the Kliwa sandstones specific to this zone have been used in two different ways. Thus, firstly humans used it as a construction material (to build houses, fences, etc) and secondly, they shaped it in situ, building shelters or worship places. Thus, the geology of the area has offered people the real opportunity to use nature for their purposes.



Fig. 9. Bisericuța lui Iosif.

The friability of the sandstone deposits and the moderate compaction degree has enabled man to transform it even in a rudimentary manner specific to the Paleolithic or Neolithic era. During the Middle Ages, on the background of the religious and political strains, a rather religious use of these places is recorded, also sustained by the climate and the morphology of the region. The low erosion rate, the isolation and a very difficult access have

allowed great preservation in time and their turning into historical sites of great value.

The way these places have been created, their purpose and the utility throughout the time, as well as their considerable age have contributed to their listing in the category of geosites by geographers and historians. The anthropogenic factor completes, by its presence and by the activities deployed in the perimeter of these archeological sites, the matrix of interactions between the physical and the environment rendered human in this way; man has changed the structure and the func-

tion of some of these religious places (churches and others) from the sandstone deposits, a fact that allowed us to identify the evolution of these sites by geomorphological criteria, a process simultaneous to the historical research. Due to the anthropogenic influence and the natural one, these geosites have gained a scientific, social, cultural, economic and tourism value as well as other additional values, which have turned them into geomorphosites.

5. CONCLUSIONS

The best known of these geomorphosites are: Crucea Spătarului, Agatonul Nou and Vechi, Piatra Îngăurită, the Church of stone of Alunișu, Fundătura, Bisericuța lui Iosif, the Cave or Scaunele lui Negru Vodă (fig. 9).

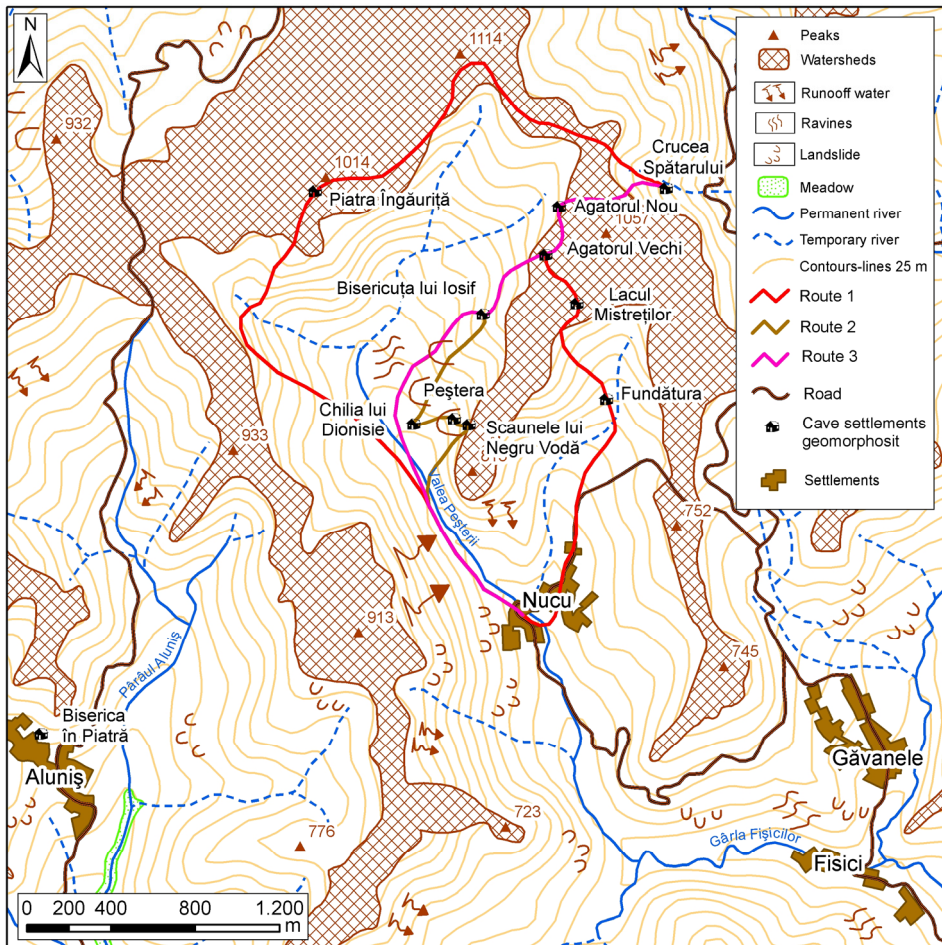


Fig. 10. Geo-tourism map of the cave settlements.

Their tourism capitalization may be done in a classical manner or by using methods appropriate to modern tourism. In the area of the rupestrian places some thematic trips may be organized such as: “The Road of Treasures”, in which tourists must discover the rupestrian places with the aid of certain indexes, or the “Scouts Campaign”, where the students, helped by guides and teachers may search the area of the places, the zone of “old ladies of Ulmet” and the round rocks of Ulmet.

Another thematic ride would be a religious and historical route in which a good guide could reveal their history and religious content. But, in the absence of a boarding facility, one may establish a camping place for tents at Ulmet, very useful for traveling around the area. One may also organize trips on bicycles or ATVs, as all the roads are paved with stone.

In the studied area we have simulated three tourism routes which may reveal the geomorphosites:

- 1st route: Nucu – Piatra Îngăurită – Crucea Spătarului – Agatoane – Lacul Mistreților – Fundătura – Nucu (5 h ½ - 6h);

- 2nd route: Nucu - Scaunele lui Negru Vodă – The Cave (bottom of the cave) - Dionisie Torcătorul - Bisericuța lui Iosif and back (2 h ½ - 3h);

- 3rd route: Nucu - Bisericuța lui Iosif – Agatonul Vechi – Agatonul Nou – Crucea Spătatului and back (3 h ½ - 4 h). In order to turn it into reality, a geotourism map of the rupestrian places has been made (fig. 10).

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