



Geotourism and Natural Resources: Shkodra (Northern Albania)

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4 Text-Figures

*Geotourismus
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Geotourismus und Naturschätze: Shkodra (Nordalbanien)

Zusammenfassung

Die Shkodra-Region liegt im Norden Albaniens am südwestlichen Ende des Shkodra-Sees. Sie grenzt an Montenegro und an die Adria. Die Stadt Shkodra ist eine der ältesten und wichtigsten Städte Albaniens. Die drei Stauseen Vau Dejes, Komani und Fierza veränderten die gebirgige Landschaft nachhaltig. Bei Bootsfahrten auf den Stauseen zeigt sich die geotouristisch einzigartige Landschaft mit Blicken auf die eindrucksvolle Szenerie der Canyons.

Abstract

The Shkodra region is situated in Northern Albania and more exactly at the Southwestern corner of the Shkodra Lake. It borders on Montenegro and the Adriatic Sea. Shkodra is one of the most ancient and important cities of Albania. Three artificial lakes (Vau Dejes, Komani and Fierza) changed the character of the wild mountainous landscape. The lakes are navigable and marvellous geotouristic landscapes with breathtaking views of a spectacular canon morphology are exposed.

1. History and Archeology of the Shkodra Area

The Shkodra region is situated in Northern Albania at the southwestern corner of Lake Shkodra. It borders with Montenegro and the Adriatic Sea. It is one of the most ancient and important cities of Albania.

Shkodra city was founded in the 4th century B.C. It was the main center of the Illyrian kingdom and the first king was Bardhyli (White Star) in 449–359 B.C. In the period 229 B.C and 9 A.C. Roman emperors ruled the Illyrian kingdom and created the Illyrian Province reaching from

the south of the river Danube down to the Adriatic Sea. Later Goths, Huns, Bulgarians, Avar tribes and lastly the Slavs with the victory over Byzantium in 580 A.C. successively invaded this area. Later the Shkodra region passed from the Stefan Lazarevitch rule to the Venetian Republic lasting up to 1479. From that time on it was included in the Ottoman Empire and in 1913 the Shkodra region was liberated with the Proclamation of Independence in 1912 (JAQUES, 1995)

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Text-Fig. 1.

Panoramic view of Lake Shkodra and the Post-ribe mountainous landscape of limestones and volcanic basalts (MiddleTriassic) and megalodont limestones (Upper Triassic).



According to the well known researcher Edwin JACQUES, the origin of the Illyrians is considered a long historic process and the consequence of the gradual arrival of peoples and their fusion and assimilation with the Neolithic Pelasgian ancient cultural background. Such a miscellaneous process created a new culture named Illyrian. The archaeological discoveries in Koman near Shkodra document the Illyrian culture succession to the Arbers (Albanians). According to Albanologic researchers the Albanians are among the oldest Indo-European peoples, while their language is the oldest Indo-European language (together with Armenian [ÇABEJ,1985]). Important contributions in this field have been made by Austrian and German researchers such as Gottfried Wilhelm LEIBNIZ (1646–1717), Hans Erik TUNMAN (1746–1778), Johann Georg VON HAHN (1811–1869), Gustav MAJER (1850–1900), Norbert JOKL (1877–1942), Maximilian LAMBERTZ (1882–1963) and also Albanian researchers like Kostandin KRISTOFORIDHI, Eqerem ÇABEJ, Mahir DOMI, Aleks BUDA, Shaban DEMIRAJ.

The Shkodra area is distinguished by important archaeological findings. Among them the most conspicuous is Rozafat castle, which is a megalithic construction of the IXth century B.C. Other intriguing objects are several early fortifications and cyclopic stones found around the early ancient settlements in Gajtani, Drishti castle and Dalmatia. The first human traces are discovered in the Gajtani cave. They correspond to the Mesolithic period (about 6000 years B.C.). Near the village Dedaj 40 tombs were found and dated (2000 years B.C.), whereas in the Shtoj area a big cemetery with 250 tombs dating from the 12th century B.C. was discovered (KORKUTI, 1985).

The Shkodra area is the principal center of catholicism in Albania. It should be noted, that the people conserved their religion even under the ottoman rule with the support of Austria, Italy and France. In Shkodra a Jesuit seminar and a Franciscan Assembly played an important role in the fields of culture, education, awakening of national conscience and the movement for independence. Shkodra city is the birth place of distinguished national personalities like Cardinal Ernest Koliqi, Padre Gjergj Fishta, Pashko Vasa, Zef Jubani, Ndre Mjeda, Filip Shiroka, Luigj Gurakuqi, Hil Mosi etc.

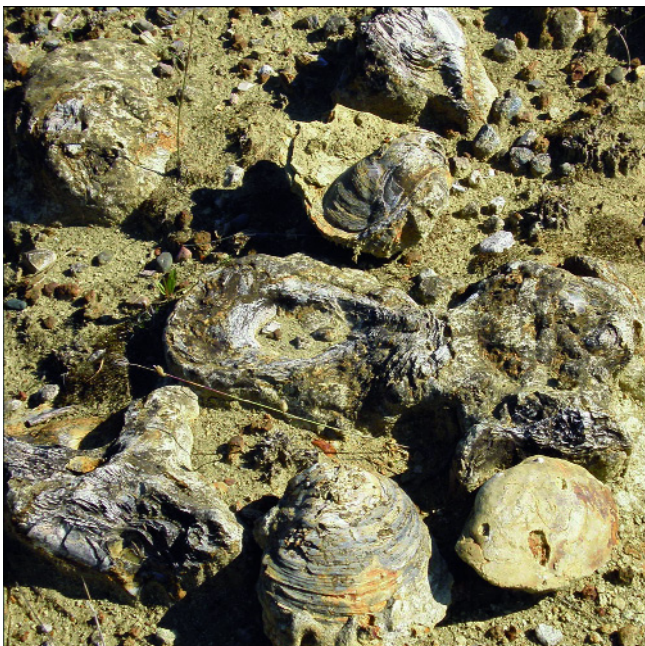
2. Lake Shkodra and its Rivers

Among the most significant points of Shkodra area Lake Shkodra (Text-Fig. 1) is outstanding with particular economic, ecologic and geotouristic value (KABA, 2001). It belongs to Albania and Montenegro. It is the biggest lake in the Balkan region and maybe the youngest one in Europe. Close to Lake Shkodra occur Pliocene clay sediments with burial ground of fossils (Text-Fig. 3). The lake is 43 km in length and its surface changes according to the precipitations from 360–530 km². It is navigable and connected with the Adriatic Sea by the Buna (Buena) River (670 m³/sec), flowing from the lake. Another river in the Shkodra area is the Drini River, which is the longest one in Albania (350 km in total including two main tributaries). The last ones are the Drini Zi River (Black Drini River) sourcing from Ohrid Lake in Macedonia and the Drini Bardhe River (White Drini River) coming from the Peja highlands in Kosova. In this



Text-Fig. 2.

Koman dam on Drini River situated on an anticlinal fold of Upper Jurassic to Lower Cretaceous radiolaritic schists, marl, radiolaritic and *Calpionella* Limestones, and also with flysch deposits (Maastrichtian–Eocene).



Text-Fig. 3.
Burial ground of fossils in situ within Pliocene clay sediments, near the shore of Lake Shkodra.

river three big dams and three artificial lakes (Vau Dejes, Komani and Fierza Lake) were constructed. Fierza Lake is 40 km in length. Three Hydro Power Plants installed are the main energetic resource of Albania. It has to be emphasized, that the artificial lakes transformed the wild mountainous landscape and views to the spectacular impressive canyon morphology were exposed. The lakes are now navigable and the marvellous geotouristic landscapes can be observed from boats (Text-Fig. 2).

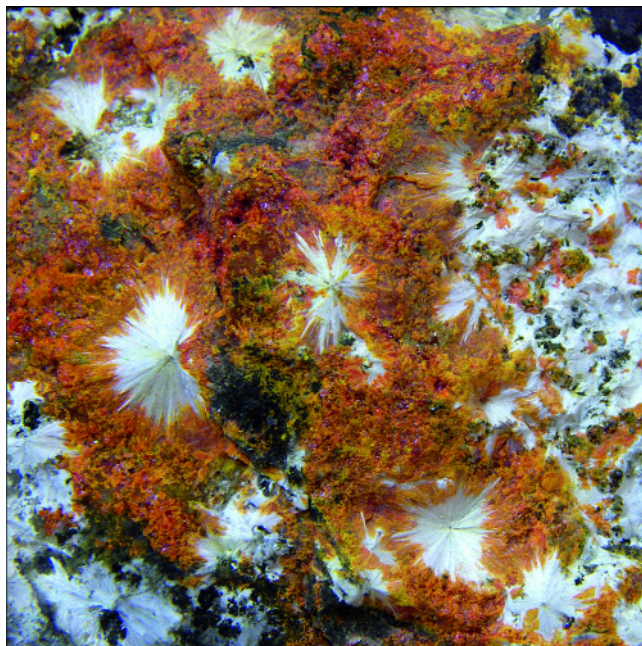
3. The Geology of the Shkodra Area

The geological structure of the Shkodra area is rather diversified and interesting (XHOMO, 2002). It is built of three tectonic units: the Albanian Alps, the Cukali and the Mirdita zone. The oldest geological deposits are of Paleozoic age, the youngest ones from the Eocene–Pliocene. The Albanian Alps represent a carbonate platform building the southern extremity of the High Karst zone. The Alps with Triassic–Cretaceous sediments are thrust upon the Cukali and Krasta subzones. The relief is mountainous with naked rude summits over 2500 m altitude and verdant valleys. Karst phenomena are widely developed.

The Cukali subzone is located (like a sandwich) between the Albanian Alps and the Mirdita ophiolite zone. It displays a remarkable anticline dome and is composed of Triassic–Jurassic–Cretaceous sediments in the center and Cretaceous–Eocene deposits in the periphery. This zone corresponds to Pindi zone in Greece. A differentiated relief with various forms is characteristic. The Mirdita zone with Jurassic Ophiolites is overthrust in northwestern direction onto Cukali subzone. The Ophiolites are represented mainly of ultrabasites and locally by gabbros. In addition, Triassic–Jurassic and Jurassic–Cretaceous formations are found as well.

4. Geotouristic Itineraries and Mineral Resources

In the Shkodra area several geotouristic itineraries are traced. The most remarkable is the field trip Shkoder – Ura e Mesit – Kalaja e Drishtit – Ura e Shtrenjte – Cukal and



Text-Fig. 4.
White fibrous radial dawsonite aggregates in red realgar ground mass (Koman hydrothermal deposit).

Shkoder – Sheldie – Vau Dejes – Koman. The last one, but not of less importance is the ferry travel along the Komani lake up to the Fierza Lake.

The people of the Shkodra region are known for cultivation of different varieties of fruit-trees, viticulture, fig trees and pomegrade, as well as for the production of high quality wine.

Several natural mineral resources have special importance in this area (ÇINA, 2004):

- Massive sulphide copper mineralization related to a Triassic–Jurassic volcano-sedimentary formation cropping out in Palaj.
- Ti-magnetite V-bearing magmatic mineralization related to pyroxene-amphibole gabbro and dolerites.
- Dawsonite (Text-Fig. 4) and realgar-auripigment mineralization in the Koman area. It is an example of a very rare mineralization type issued by the hydrothermal alteration of carbonate-surrounded rocks belonging to Eocene flysch (FERRINI, 2003).
- Fluorite deposits in the Cukali area, located in Cretaceous carbonates. It is a vein-like ore type associated with quartz.
- Magnesite deposits of the Gomsiqe-Dush area in vein-like ore bodies within ultrabasic rocks.
- Carbonate raw material suitable for cement production.
- Decorative stones of coralline limestones white calcite worm-like forms set within a gray black carbonate ground mass.

The Shkodra area provides a wealth of opportunities and unexpected surprises. Let's try to discover them.

References

- ÇABEJ, E. (1985): The problem of the autochthony of the Albanians in the light of place names. – In: The Albanians and their territories, Tirana (Publishing House 8 November).
- ÇINA, A. (2004): Mineralogy of Albanian opaque minerals (in Albanian). – Instit. Geol. Research Tirana, 248 p., Tirana.
- FERRINI, V., MARTARELLI, L., DEVITO, C., ÇINA, A. & DEDA, T. (2003): The Koman dawsonite and realgar-orpiment deposit, northern Albania: Inferences on processes of formation. – The Canadian Mineralogist, **41**, 413–427, Québec.

JAQUES, E. (1995): The Albanians: An Ethnic History from Prehistoric Times to the Present. – 785 p., Jefferson, North Carolina (McFarlands & Comp.).

KABA, M. [Ed.] (2001): Physical Geography of Albania. – Albanian Acad. Sci., Inst. Geogr., 2, 610 p., Tirana.

KORKUTI, M. (1985): Illyria – Periodical Publication of the Center of Archaeological Researches, Tirana.

XHOMO, A., KODRA, A., SHALLO, M., XHAFA, Z. (2002): Geology of Albania and Geological Map (1:200 000). – 320 p., Geological Survey of Albania, Central Archive of Geology, Tirana.

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