

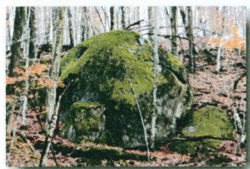






## Geološki lokalitet: Garjevica, "kamene kugle"

### Geosite: Garjevica, "stone balls"



"Kamene kugle" / "stone balls"  
foto: arhiva Državnog zavoda za zaštitu prirode

Migmatitne „kugle“ u Garjevici su jedno od najmističnijih mjesta u Regionalnom parku Moslavačka gora. Na lokalitetu unutar mase granita izdvajaju se manja kuglasta tijela migmatita, koja su oblikovana u procesu nastanka (hlađenja) stijene tzv. kuglastim lučenjem.

*Migmatite "balls" in Garjevica is one of the most mystical places in the Regional Park Moslavačka gora. At the Garjevica site within the granite rocks you can find small spherical bodies of migmatites, which are shaped in a process of rock forming (cooling), so-called spherical secretion of granite.*

Karta sa granicom Regionalnog parka Moslavačka gora  
Map with border of Regional Park Moslavačka gora  
Izvor: Google Earth, 2011.



#### Geologija Moslavačke gore Geology of mt. Moslavačka gora

Moslavačku goru u osnovi gradi magmatsko-metamorfni kompleks formiran krednim granitnim migmatizmom i metamorfizmom, uz djelomično sačuvani stariji paleozojski, metamorfni kompleks koji se kao veća cjelina može naći u centralnim i južnim dijelovima gore. Granitne stijene izgrađuju približno 2/3 kristalnog terena, a ostatak su metamorfne stijene srednjeg do visokog stupnja metamorfizma različite starosti. Tijekom evolucije Panonskog bazena na rubnim područjima kristaline mase Moslavačke gore istaknule su se sedimentne stijene u razdoblju od miocena do kvartara.

Moslavačka gora represents one of the major surface exposures of crystalline basement within the Tertiary sediments of the Pannonian Basin. Moslavačka Mount basically builds igneous-metamorphic complex formed in Cretaceous granitic magmatism and metamorphism, with partially preserved older Palaeozoic metamorphic complex. Granite rocks build up about 2/3 crystalline basement, and the rest are different age's intermediate- to high- grade metamorphic rocks. In the period from the Miocene to Quaternary, during the evolution of the Pannonian Basin, at the border area of crystalline basement sediment rocks were deposited.

#### Geološka karta Moslavačke gore Geology map of mt. Moslavačka gora

Source: Interpretation of geological heritage and the most important geosites of mt. Moslavačka gora, Zagreb, 2008  
Published by: Institute of Geology and Mining, Department of Geology, Faculty of Science, University of Zagreb  
Author: D. Štanić, Z. Radošević, M. Radošević, J. Čirjak

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Tekstura migmatita / Migmatite texture  
foto: arhiva Državnog zavoda za zaštitu prirode

Migmatiti su metamorfne stijene nastale pretalijvanjem granita kod srednjih i niskih tlakova. Karakteristična tekstura migmatitne stijene je vrpčasta ili trakasta tekstura kod koje se paralelno izmjenjuju svijetle i tamne pruge. Svijetle pruge (leukosom) izgrađuju minerali kvarc, kiseli plagioklas, te kalijski feldspati, dok sastav tamnih dijelova (melanosoma) tvore minerali biotit, granat, sillimanit, te često i cirkoni.

A Migmatite ("mixed rock" in Greek) – heterogenous metamorphic rock form under extreme temperature conditions during prograde metamorphism. Migmatites are composed of a leucosome (lighter parts), and a melanosome (darker parts). In many cases the darker part of the rock, consisting of biotite mica and hornblende, has been intruded by veins of lighter rock consisting of quartz and feldspar.

#### Jeste li znali... / Did you know...

U portugalskom geoparku Naturtejo na uzvišenju smjestilo se selo Monsanto. Ono je neobično stoga što je cijelo brdo izgrađeno od većih i manjih granitnih kugli, nastalih identično kao kugle na Moslavačkoj gori. Neke od kugli promjera su i desetke metara, a kuće su se smjestile između njih tako da djelomično kugle hvata i unutarje zidove pojedinih objekata.

In the Portuguese Geopark Naturtejo you can find village nestles on the slope of a steep hill - Monsanto. The most typical aspect of Monsanto is the fact that the village developed around impressively big and amazingly balanced granitic boulders. Each granite ball was modeled and exposed by the weathering elements during millions of years, creating patterns that excite the imagination. It is not hard to see houses using granite boulders with thousands of tons as walls and roof. Similar, interesting features are situated here – on Moslavačka gora.

