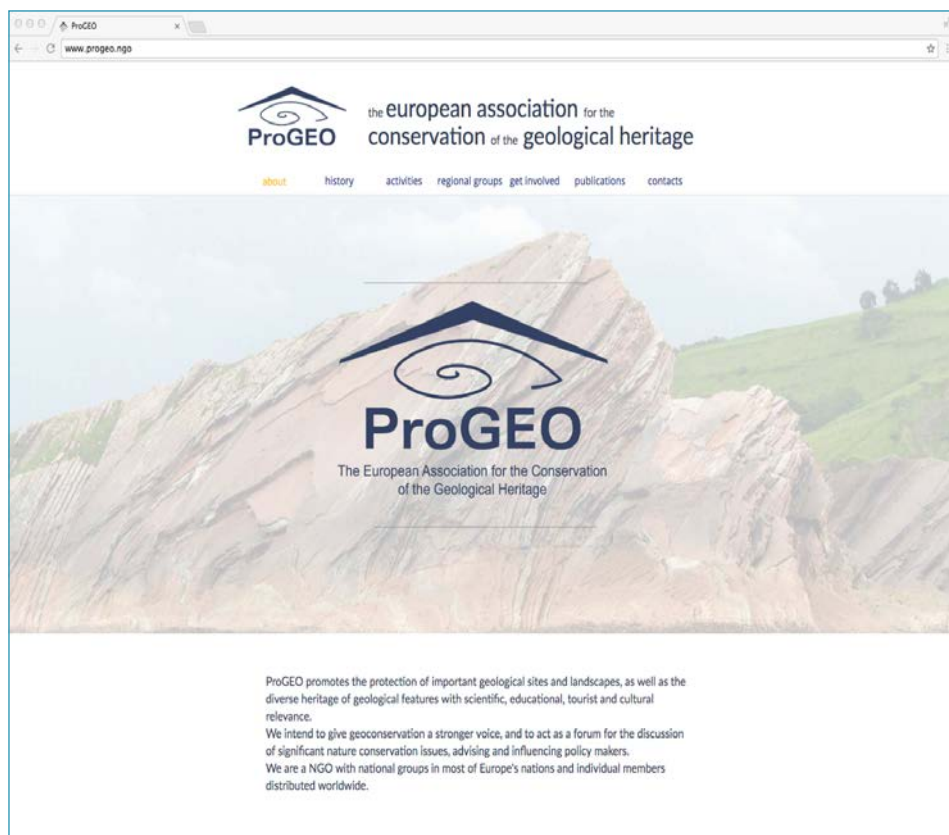


the european association for the conservation of the geological heritage

## new ProGEO site

Since August 11<sup>th</sup> ProGEO has a new website and a new URL .

Find out more about the new site at:  
<http://www.progeo.ngo>.



## 2016 world conservation congress

one more step towards the international recognition of geoheritage

by:

José Brilha - [ [jbrilha@dct.uminho.pt](mailto:jbrilha@dct.uminho.pt) ]



The World Conservation Congress, under the theme “Planet at the crossroads”, was held between 1-10 September, 2016 in Honolulu, Hawai’i. ProGEO as a IUCN member has participated in this quadrennial congress for the 3rd time. This text reports the main geo-related activities done by ProGEO (with the close collaboration of other two IUCN members, the Geological Society of Spain and the Spanish Society for the Defense of Geological Heritage and Mining Heritage).

After the approval of the 2008 and 2012 motions, the IUCN Assembly approved the 3rd motion presented by ProGEO: motion 91 - “Conservation of moveable geological heritage” (<https://portals.iucn.org/congress/motion/091>).

This IUCN resolution urges the World Commission on Environmental Law and the World Commission on Protected Areas to prepare guidelines on the protection, conservation and management of this geoheritage, in compliance with national and international regulations of its commerce.

An intensive course “The 5 new Geos”: Geoconservation, Geoheritage, Geodiversity, Geoparks and Geotourism” was offered as one of the activities integrated in the Conservation Campus. The interactive training and capacity-building sessions of the Conservation Campus provide opportunities to further develop skills for conservation practitioners through peer-to-peer learning and academic sessions. Our 3h course was given in two sessions, one in English and one in Spanish, with the total participation of 30 persons from 10 countries. The feedback of participants regarding the overall quality of the course was very good.

One of the key issues in the congress's agenda was the approval of the 2017-2020 IUCN Programme. The programme draft was submitted to the congress with three main areas: 1. Valuing and conserving nature; 2. Promoting and supporting effective and equitable governance of natural resources; 3. Deploying nature based solutions to address societal challenges including climate change, food security and economic and social development. During the congress, ProGEO has submitted several amendments to this draft, particularly in what concerns the first area where geodiversity and geoheritage considerations where necessary. In spite of the final text of the programme is not yet available, the IUCN Assembly has partially approved our amendments. In the future, it would be convenient to start earlier the interaction with the Programme Congress Committee in order to include substantive geoconservation actions in the 2021-2024 IUCN's programme.



Each World Conservation Congress produces a statement that summarizes key issues, aspirations, new ideas or actions emerging from the many activities and deliberations. This year's congress has approved a final declaration called "Hawai'i Commitments" (<https://portals.iucn.org/congress/hawaii-commitments>). Congress participants have participated in the drafting process of the Hawai'i Commitments and some of the ProGEO proposals were included in the final text. The text explicitly refers geodiversity and makes several references to nature conservation and to the importance/value of nature as a whole, which shows that IUCN is following the resolution approved by our 2012 motion.

The results of the participation of ProGEO in this 2016 World Conservation Congress are one more step in the long journey towards an integrated approach to nature conservation that becomes necessary to be implemented by all national and local public administrations.

## new golden spikes for the Portuguese two GSSPs

by:  
João Rocha - [joaorocha@uc.pt]



During the month of July, two new "Golden Spikes" were officially carved in the limestone strata, which define the geological beginning of the Bajocian and the Toracian stages.

A "golden spike" represents the best point as a reference for a certain stage boundary on the geological time scale. The "golden spike" is a physical marker placed in the rock to represent a Global Boundary Stratotype Section and Point (GSSP).

The International Commission on Stratigraphy (ICS) established two GSSPs in Portugal: the GSSP for the Bajocian stage ( $170.3 \pm 1.4$  MA), located in the Murtinheira Section - Cabo Mondego, was ratified in 1996; the GSSP for the Toarcian stage ( $182.7 \pm 0.7$  MA), located in the Peniche section - Ponta do Trovão, was ratified in 2014.

The official ceremony for the Bajocian "golden spike" carving was held on the July 24th in Figueira da Foz. Scientists, politicians, journalists, nature conservation rangers and general public walked side by side along the Cabo Mondego beautiful cliffs to achieve the limestone strata at the beach where the GSSP may be found. As a result of this ceremony, the GSSP can now be more easily observed by all the people walking on the beach, due to the presence of a physical "golden" marker and an informative panel.

More than twenty years after the ICS ratification of the Bajocian GSSP, the Murtinheira section holds the official "golden spike". This GSSP was included in the first systematic inventory of the Portuguese geological heritage as a geosite with international relevance. In addition, the Cabo Mondego was defined as a Natural Monument in 2007 and it was included in the Portuguese protected areas network.



On the following day the Toarcian “golden” marker was carved on the limestone strata in the Peniche section (Ponta do Trovão). In line with the previous day ceremony, a great number of scientists, politicians, journalists and general public was able to take attend the official ceremony. Once again, the physical marker of the GSSP and an informative panel became available after the event.

We must stress the presence of the Stanley Finney (International Commission on Stratigraphy), Stephen Hesselbo (International Subcommittee on Jurassic Stratigraphy) Maria Helena Henriques (Department of Earth Sciences – University of Coimbra), Prof. Artur Sá (National Committee for the International Geosciences Programme), Luis Victor Duarte (Department of Earth Sciences – University of Coimbra), João Ataíde (Mayor of Figueira da Foz), António José Correia (Mayor of Peniche), among other participants.

## naturtejo UNESCO global geopark

10 years of geoconservation (2006-2016)

by:

Joana Rodrigues - [ [joana225@gmail.com](mailto:joana225@gmail.com) ]

Naturtejo UNESCO Global Geopark was the first geopark in Portugal, integrating European and Global Geopark Networks in 2006. The territory includes 7 municipalities, namely Castelo Branco, Idanha-a-Nova, Nisa, Oleiros, Penamacor, Proença-a-Nova and Vila Velha de Ródão, in an area with 5000 km<sup>2</sup> that has been promoting local sustainable development through geo-logical heritage.

The territory has wide areas flattened by Mesozoic polygenic evolution over a major Neo-proterozoic basement, some Ordovician quartzite ridges and late-Variscan granite inselbergs, intramountain basins with alluvial to fluvial coarse sediments deposited during the Alpine Orogeny. We can observe the stream network deeply carved during the climate crisis of the Pleistocene and induced by important neotectonics, which broke the landscape into a succession of blocks (grabens and horsts) and motivates some of the geothermal richness of the region.



There are 170 geosites inventoried by 6 typologies: geomorphology, hydrogeology, tectonics, palaeontology, stratigraphy/sedimentology, petrology/mineralogy and geominning heritage, from local to international relevance. The scientific value of the geological heritage is demonstrated by the great number of scientific publications released in the last 10 years and the selection of the territory for the organization of meetings such as the recent International Congress of Ichnology (2016).

In 2007 the Geopark was recognized by ProGEO-Portugal and National Geographic-Portugal with a Geoconservation Award due to its work in the identification, conservation and enhancement of the geological heritage.

The ProGEO Portuguese group had an important role on the last revision of the Law for the Nature Conservation (2008) contribution for the legally recognize of Geoparks as areas with supranational designations, at a time where there was only Naturtejo Geopark in Portugal. However, geoparks are not yet assigned to any legal based strategies, measures or laws. The Naturtejo Geopark territory is regulated by several legal instruments and management policies.

The geological heritage inventory supported the definition of new Protected Areas such as the Portas do Ródão National Natural Monument (2009) and the Serra da Gardunha Regional Protected Landscape (2014) with the main goal to protect the geological heritage and geodiversity. 56% of the listed geosites in the Geopark are protected indirectly, under several frameworks and five (of the seven) municipalities included the geosites in their municipal management plans.

The Naturtejo Geopark has also been playing active role and contribution to increase public awareness of the potential impacts of human interventions on the geological heritage and landscape, namely the construction of dams, wind farms and electric network. The most expressive case was the Alvito Reservoir, which the Environmental Report forced to move the dam 1,6 km upstream, provoking less environmental impacts on Portas de Almourão geosite - a decision never seen before in Portugal. Naturtejo Geopark was assigned to help the national electricity company, by technical and institutional means, to find the best solutions to preserve natural and cultural heritage and to contribute for reducing impacts.

Geosites with lower vulnerability, higher didactical importance, more legibility and aesthetic values were interpreted with panels, leaflets, books and digital tools, included in trails, in thematic routes and the interpretation centres' have been including geodiversity and geological heritage. This geosites are used for the Educational Programmes, with strategies adapted to the students' levels and to raise awareness for Geodiversity with general public.

Naturtejo Geopark has been making a great effort in the promotion of geotourism and in the inclusion of the geological heritage in the tourism offer, with road signs, developing geo-products, creating tourist packages with visits to geosites, geo-trails, interpretation centres. Together with other UNESCO Global Geoparks, Naturtejo Geopark help to introduced the geological heritage in some of the biggest tourism trade fairs in the world (e.g. Spain and Germany).

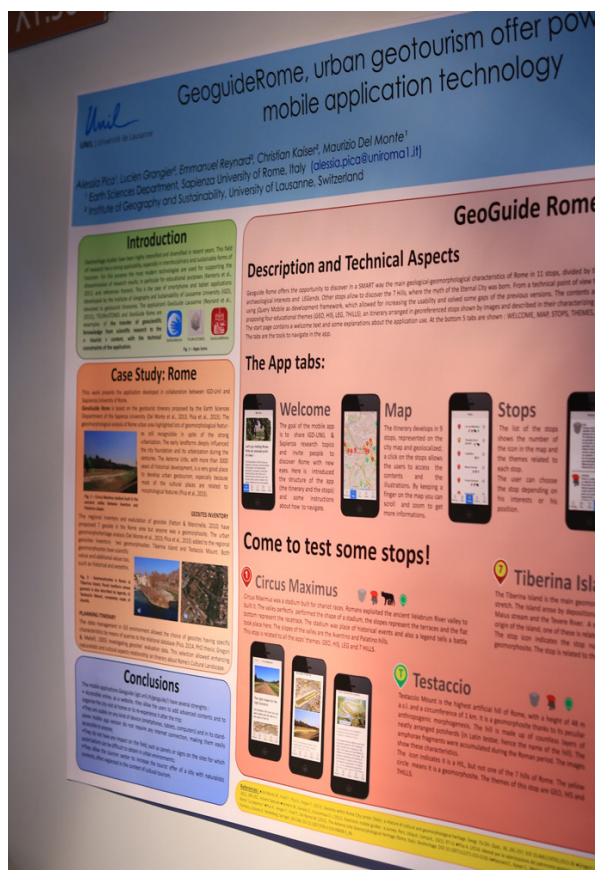


## european geosciences union

General Assembly 2016

by:

Joao Rocha - [joaorocha@uc.pt] & Lesley Dunlop - [lesley.dunlop@northumbria.ac.uk]



The beautiful city of Vienna hosted the EGU2016 conference from 17 to 22 April, gathering a large number of scientists (13.650 in total) from more than 100 different countries.

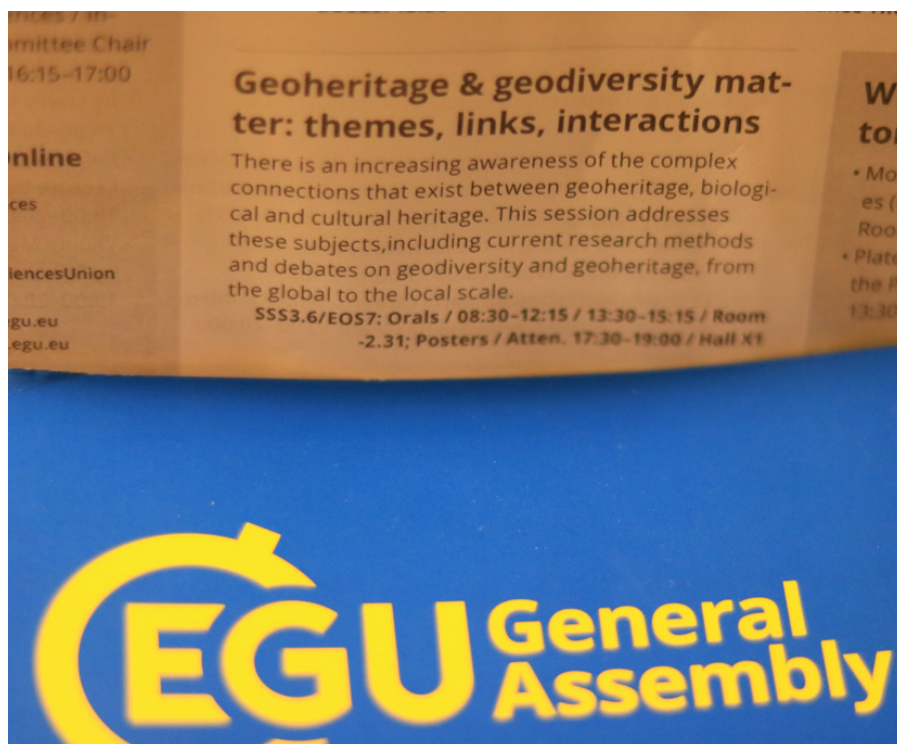
Geoheritage and Geodiversity were two of the themes to be found among many others.

On Thursday 21, there was the co-organized session addressed as "Geoheritage and Geodiversity Matter: Themes, Links and Interactions" (SSS3.6/EOS7). The session was co-organized by three groups: the International Association of Geomorphologists' Working Group on Geomorphosites; the Working Group on Landform Assessment for Geodiversity; the ProGEO-European Association for the Conservation of the Geological Heritage.

For the oral session and poster sessions, several works were presented and some of these scientific works were very interesting and innovative. Some of the presented works generated some discussion and were not consensual among the several participants, either by the unorthodox approach or by the lack of geological singularity or importance/relevance. But isn't this the base of science? After all, we are all linked with an emergent science - Geoconservation!

We were able to see different approaches regarding the Geoheritage and Geodiversity issues and we also realized the broad meaning these concepts and words may have, stressing the importance of creating a conceptual and widely accepted terminology for the concepts.

The first presentation by Murray Gray focused exactly on the definition of Geoheritage and Geodiversity and linked values and strategies towards conservation of the geological important features.



The following presentations focused, on general terms, on the methods to assess, quantify and represent geoheritage and geodiversity. During the morning session we were able to “meet” some good examples of the linkage and interactions between the abiotic and biotic characters, and well as cultural (e.g. Geomorphological analysis of a cultural heritage – presented by Prof. Emanuel Reynard) features to the geodiversity and geoheritage.

The lunch break was a good period to debate some ideas, to meet the other colleagues and to prove some local gastronomic specialities offered by the French colleagues in representation of the Chaîne des Puy region.

The afternoon session was, again, very fruitful, and during session 3, under the Education, conservation and geotourism sub-theme, some very interesting works were presented. We were able to know in more detail the on-going projects dealing with educational strategies to promote geodiversity and geoheritage knowledge (e.g.

A digital platform for university education on geomorphosites – by Paola Coratza) and public engagement (e.g. understanding, promoting and protecting geodiversity and geoheritage – presented by Marco Giardino). The last presentation of this session was dedicated to the Chaîne des Puy (a future UNESCO World Heritage - we hope!) which was enthusiastically presented by a non-geoscientist expert. In her presentation Cecile Olive-Garcia mentioned her recognition of the importance of geoheritage and geodiversity to promote development and education.

Later on the afternoon, during the poster session we were presented again with some very interesting scientific works. This session was very profitable as we had time to discuss ideas with the presenters as well as share knowledge and working experiences. We are grateful for and appreciate the interesting works that several scientists presented and acknowledge the conveners (Paola Coratza, Benjamin van Wyk de Vries, Zbigniew Zwoliński) and the co-conveners (Marco Giardino, Hanneke van den Ancker, Emmanuel Reynard, Sjoerd Kluiving, Thomas Kissler, Grazina Skridlaite, Alicja Najwer, Erika Vye, Stefanie Zecha) efforts to organize this very prolific session.

The EGU daily newsletter (paper printed and digitaly available) for Thursday 21 April 2016) highlighted the session theme, stressing the increasing awareness regarding the links between geoheritage, biological and cultural heritage and the research focused on Geoheritage and Geodiversity.

## the natural heritage from the Republic of Kosovo

by:

Fadil Bajraktari & Sami Behrami - [ [progeokosova@yahoo.com](mailto:progeokosova@yahoo.com) ]

The Gadime cave was discovered in July 1969, and immediately after was taken under protection. The protected area surface is 38 ha. This cave represents a unique karst phenomenon in Kosovo. It is developed at two levels. The first level is about 1250 m in length, it is explored and open to visitors. The cave is developed in the marbled limestone lens, with small spatial dimensions, fused in Permo-Triassic schist. After the tectonic action, the marble lens is disrupted by different systems of fractures, some of which served as a way of circulation of groundwater and resulted in the creation of empty spaces and speleological ornaments. This cave is known for its, scientific, tourist, geomorphological, hydrologic and educational values.

The cave is situated on the hill called “Murtur” in the “Gadime e Ulet” village, 3 km from the main road Pristina - Skopje.





The Mirusha gorge was formed in carbonate formations of the Upper Cretaceous. The canyon, besides having impressive morphological forms, it is also known for numerous lakes and waterfalls (13 lakes and 12 waterfalls) with various territories, shapes and heights. Declared as a Nature Monument of Special Importance, in 2012, by the Government of the Republic of Kosovo, with an area of 598.4 ha (Decision No. 06/75). The canyon is located at the bottom of Mirusha river flow, left branch of the Drini i Bardh river.

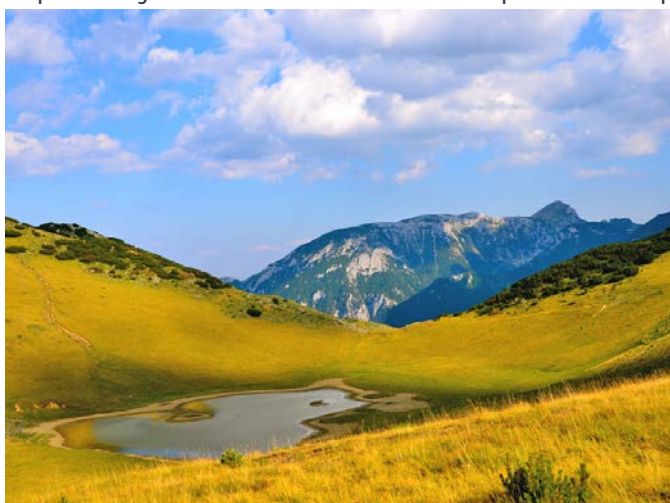
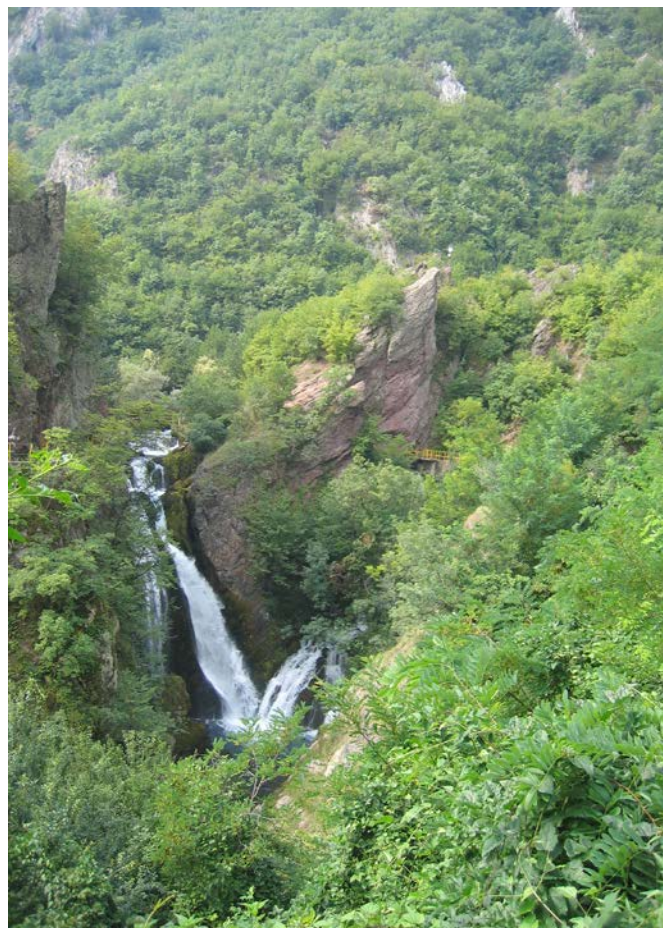
Nerodime river bifurcation represents the only example in Europe, of the flowing of a river into two seas. The river springs in the Jezerc Mountains and in the village of Nerodime, it splits irreversibly into two branches, which are pouring in two different seas. Northern branch (left branch) flows into Sitnica River and continues its route to Ibar river, Morava and through Danube flows into the Black Sea, while the southern branch (right branch) through Lepenc river and through Vardar river flows into the Aegean Sea. This natural curiosity is quite attractive for researchers and visitors and is of great educational, scientific and tourist importance. Since 1979 it has been put under legal protection as special nature reserve. Protected reserve area is 12.78,71 ha.

The Bjeshket e Nemuna National Park in regard to geological, geomorphologic, fauna and floristic composition represents an important massif for Kosovo and whole Balkan Peninsula. There are deep, transverse valleys, often in canyon shape as shown with Lumbardhi (Bistrica) of Peja, Decani and Erenik. In January 2013 was declared a National Park (Law on National Park "Bjeshket e Nemuna" No. 04/L – 086) and occupies an area of 62.488 ha (5.7 % of Kosovo surface).

The massif of Bjeshket e Nemuna is characterized by a very rich fauna and flora with several endemic species, as a result of multiple influences of the Mediterranean region, and the Nordic euro-Siberian-Alpine, as well as frequent changes of environmental conditions in the past. The most representative species are: lynx, brown bear, european roe, wild goat, imperial eagle, mountain eagle, lesser kestrel, capercaillie, which have national and international protection status.

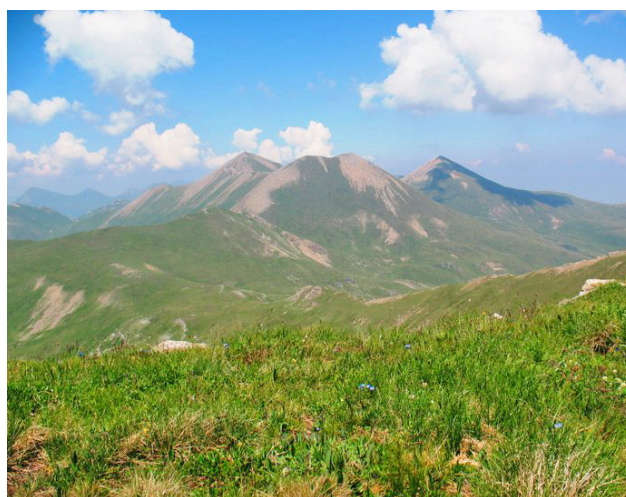
In terms of endemic species in the Park alpine and subalpine areas are present 128 balkan endemic species (e.g. burgull of koshanini, cefalaria of pashtrik, akonitum of rusolia, blackberry of peja) and relic types (e.g. black hornbeam), spread within the forests of oak and beech. Some of the relict species should be taken under strict protection considering their economic and science values.

This park constitutes the western suburb of Kosovo, descends almost vertically and ends on the east and northeast at the end of Dukagjini valley and the valley of Iber, and in the west closes the mountain (border) with Albania and Montenegro. Bjeshket e Nemuna in Kosovo has an extension in a north-south length of almost 50 km, while the width does not exceed 26 km.



Sharri National Park ranks among the most attractive and most important mountains in the Balkans. A part of this territory with an area of 39,000 ha had the status of National Park since 1986 under the Law on the National Park "Sharr" No. 11/86.

The Sharri National Park is characterized by special beauty and natural values (biological, bio-geological, geomorphologic, hydrological, climatic and landscape) which have special scientific, educational, cultural, historical, recreational, tourist and aesthetic importance. Sharri is ranked among the six areas (centre) with the richest biodiversity in Europe. Parts of this rich biodiversity are: over 2000 species of plants (about 400 endemic plants, 20 types steno-endemic, over 250 medicinal plants, 160 types of wood), over 180 communities (associations) plant, 32 species of mammals (excluding bats), 19 types of reptiles, 12 types of amphibian species, 200 species of birds, 147 species of butterflies etc. Particular importance is the rich biodiversity of endemic flora and fauna that makes Sharri a specific endemism centre of high mountains in the Balkans and Europe.



## geodiversity and geoheritage

co-organized session (GM1.3/EOS19/SSS3.12) EGU 2017

by:  
ProGEO - [ [progeo@progeo.ngo](mailto:progeo@progeo.ngo) ]

A Geodiversity and Geoheritage session will take place in European Geosciences Union - General Assembly 2017 (23–28 April 2017).

This session is being co-organized by Benjamin van Wyk de Vries, Paola Coratza, Zbigniew Zwolinski, Marco Giardino, Hanneke van den Ancker, Emmanuel Reynard, Sjoerd Kluiving, Alicja Najwer, Erika Vye, Stefanie Zecha.



Geodiversity and Geoheritage are core concepts and tools for the dissemination of Earth Sciences ideas, and for the protecting of unique and valuable landforms and landscapes. The importance of conserving geodiversity through geoheritage is now widely acknowledged and introduced in the European Landscape Convention and the EU Soil Strategy.

The geodiversity and geoheritage are arousing strong interest and debate, not only of researchers in Earth Sciences but also of workers in biology, spatial planning, tourism and cultural heritage: there is a raising awareness of the complex connections that exist between all these domains. Those interested in integrated and interdisciplinary approaches are particularly involved. Several attempts have been made to define and assess geoheritage and geodiversity. As with biodiversity, when describing the geodiversity of an area it can refer to different aspects, such as the maximum variety as well as those elements and patterns that are characteristic for the genesis of a specific area.

The Conveners want to continue on the successful last five EGU years of meetings to address all aspects of geodiversity and geoheritage subjects, including current methods of research and debate in international as well as national scientific worlds, from the global to the local scale.

In particular, they invite PICO presentations and posters related to the following themes:

1) methodological presentations (definitions, approaches, context), 2) presentation of methods (mapping, assessment, classification and quantification), 3) case studies of geodiversity and/or geoheritage, 4) geo(morpho)sites, geomonuments and geo-hot-spots, especially studies addressing a more sustainable land use, 5) integration of quarries, mines and other human excavation into geoheritage and their effects on geodiversity, 6) geoparks and geoheritage conservation, management and promotion, 7) links and interactions between geoheritage and geodiversity, biodiversity and cultural diversity and heritage, 8) geoparks, geotourism and geoheritage conservation, management and promotion, educational aspects of geoheritage and geodiversity.

The session is planned this year to be as ORAL + PICO + POSTER session to maximise exchanges and discussion. It will be accompanied by a Splinter Meeting, where the main themes will be given a résumé and a Geodiversity Picnic will be organised to broaden the discussion and increase links with members of other disciplines of the EGU community.

The session is co-organized by the International Association of Geomorphologists' Working Group on Geomorphosites and the Working Group on Landform Assessment for Geodiversity, and ProGEO, the European Association for the Conservation of the Geological Heritage.

More information about the EGU2017 may be found at <http://www.egu2017.eu>



## Deadline next issue of ProGEO NEWS

December 19th, 2016

Please send contributions to ProGEO NEWS. Members are interested in things that happen all over the world, your experiences, activities, science, geosites, geoconservation and geotourism efforts!

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ProGEO NEWS are available in the ProGEO site (under publications) [www.progeo.ngo](http://www.progeo.ngo)

ProGEO NEWS issued 4 times a year with information about ProGEO and its activities.

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Please send your contributions (unformatted word file). 500 – 2000 words with photographs, maps and figures clearly marked as ProGEO NEWS.

If longer texts are needed, please contact the editor.

ProGEO: European Association for the Conservation of the Geological Heritage.

President: José Brilha ● Executive Secretary: Lars Erikstad ● Treasurer: Sven Lundqvist.

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