

Visit to China

IUCN-WCPA GSG

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Seven members of the IUCN-WCPA's Geoheritage Specialist Group (GSG) visited China in October 2019 at the invitation of Professor Dongying Wei of Beijing Normal University and the International Journal of Geoheritage and Parks. All seven had accepted invitations to write papers for the journal and all presented papers at an International Symposium on National Parks and Natural Heritage Protection. Kyung-Sik Woo (South Korea), as Chairman of the GSG, presented a keynote address on the topic of Key Geoheritage Areas (KGAs), a priority project of the GSG. Tom Casadevall (USA) spoke on Geoconservation programmes in the USA, Dan Tormey outlined the recently published Volcanoes World Heritage Report, John Gordon (UK) described Protected Area management planning, Murray Gray (UK) spoke on Geodiversity, Geoheritage and Geoconservation for Society, while Vic Semeniuk and Margaret Brocx (Australia) described two geosites in Western Australia.

In China, a major programme is currently underway to identify new National Parks in the country and to review all protected areas with the aim of rationalising the system and improving spatial integration. This will include examining how the 270 National and 39 Global Geoparks should fit into the scheme. The national parks have a primary focus on nature protection, whereas geoparks have a broader remit to foster sustainable development through tourism. These topics were a major theme of the Chinese contributors to the symposium.

Following the symposium, the group travelled 800km south by bullet train and coach to the UNESCO Global Geopark of Yuntaishan, a mountainous area in Henan Province and twinned with the Grand Canyon National Park. The area was established as a National Scenic Area many years ago and attracts a large and growing number of visitors currently totalling in the region of 5 million per year, paying an entrance fee of around 20 Euros each. Do the maths to get their annual income. Around 2000 people work for the Park - rangers, drivers, maintenance staff, etc., but no geologists! The group was blown away by the digital information collected, analysed and presented on screen by the park authority as a result of a requirement for visitors to scan their identity cards to gain access to the park. This enables visitor numbers to be monitored hour by hour and resources to be deployed accordingly. In addition, there are over 2000 CCTV cameras in the park with 4 staff employed to constantly scan the images.

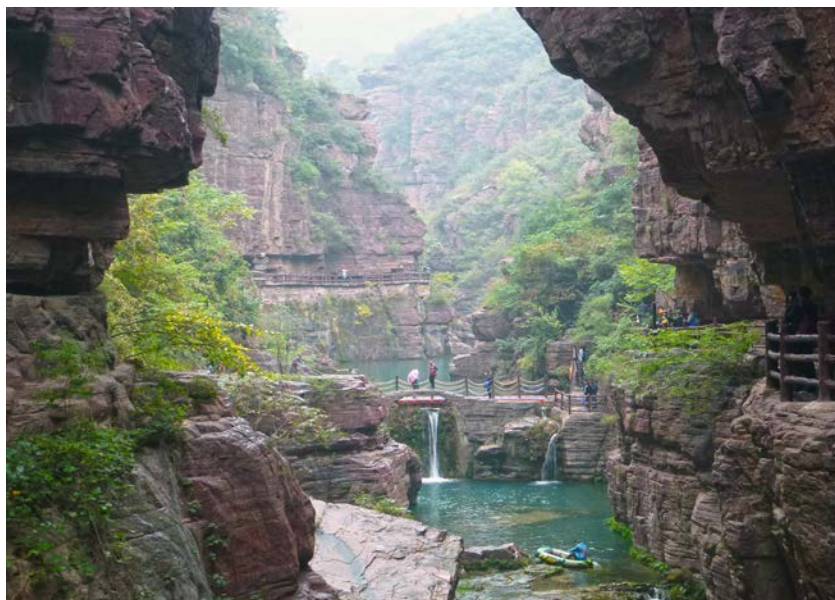
The Global Geopark designation obtained in 2004 has added scientific credibility to the already established tourism base and the group saw many of these tourist facilities and activities during their visit. These included a sound and light show, a cable car trip and a glass walkway along a limestone cliff. The thick, Cambrian/Ordovician limestone sequences overly Precambrian red sandstones, though the contact was not seen on this visit. The group accessed a major trail through Red Rock Canyon with its many waterfalls and walkways cut into the cliffs. Several information panels along the way describe the characteristics of the red sandstones.



The glass-floored walkway along a limestone cliff

A highlight of the geopark trip was a visit to the large new geological museum whose design is intended to reflect the geological evolution and structure of the park. While the building itself was impressive some of the content was less so, but an updating of the exhibits/information is planned in the near future.

During this geopark visit a meeting was held with Professor Wei to discuss possible future collaboration between the GSG and the journal/university. Overall, this was an interesting visit that introduced the geoheritage concept to a prominent, Chinese, nature conservation audience and gave the GSG members much food for thought about geopark funding, management and visitor monitoring.



The Red Rock Canyon

Visiting the Muskau Arch Geopark with the Czech– Polish GECON Summer School

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In the last week of August 2019, the local community of Tuplice, a village situated in the Lubusz Voivodship in western Poland, witnessed an unusual sight: in the middle of a seemingly dull plain a group of geologists and geoheritage enthusiasts from Poland and Czech Republic were studying some sketches drawn on the sandy road. They were participating in the Summer School on Geotourism, which is organised under the scope of the Geological Cross-border Cooperation Network (GECON) Project, and were listening to a talk given by Dr. Jacek Koźma from the Polish Geological Institute (Polish: Państwowy Instytut Geologiczny) and also a member of ProGEO.

At that very moment, the participants were struggling to imagine several-km-high ice sheet of the continental glacier that covered this area 340 thousand years ago and led to the formation of this unique glacial landscape. This uniqueness was later added to by anthropogenic changes, and today this region is protected under the transnational UNESCO Global Geopark at the boundary between Poland and Germany, called Muskau Arch (German: Muskauer Faltenbogen, Polish: Łuk Mużakowa).

The GECON Project concerns cross-border collaboration between institutions and communities from Poland and the Czech Republic that deal with research, conservation and promotion of geological heritage in the cross-border area (for more information see Useful links). Along with workshops and field trips, the Summer School on Geotourism is one of the three forms of field activities defined within this programme. It is held annually during the 2018–2021 timeframe of this Project. In 2019, the Summer School was held on 26–30 August and gathered the representatives of all the Project's partners: Geopark Ralsko o.p.s. (lead partner), Technická Univerzita v Liberci, MAS Chrudimsko, z.s., Muzeum Regionalne w Lubaniu, Stowarzyszenie Geopark Przedgórze Sudeckie, Česká Geologická Služba, Państwowy Instytut Geologiczny - Państwowy Instytut Badawczy (the main organiser of the 2019 Summer School).



Former Babina mine geotourist trail

The theme of GECON Summer School 2019 was “Methodology of geotouristic management of post-mining objects and geosites”. The event was held in the region most suitable for this purpose: The Muskau Arch Geopark, which in 2015 joined UNESCO Global Geopark Network. The Geopark is located in the east of Germany and in the west of Poland. The Lusatian Neisse river cuts through the Muskau Arch and constitutes the state border between both countries.

The uniqueness of the Muskau Arch Geopark comes from the fact that it is the one of the most representative fully-terminated push moraines in Central Europe; this moraine resulted from the activity of a glacial ice sheet whose edge extended from Hamburg, past Berlin, to Kraków around 340,000 years ago (Elster Glaciation). In the area of Bad Muskau City (on the Polish side Łęknica City), a 20-km-long glacial lobe was released from the ice front that squeezed, folded and pushed forwards the soft ground encountered on its way south.



Dr. Jacek Koźma in action - drawing geological sketches on the sandy ground

On the fringe of this lobe, the Muskau Arch push moraine was formed and gained its perfect horseshoe shape that is clearly visible on geological maps and – to a lesser extent – in the topography. The most remarkable benefit of the glaciotectonic processes was, however, that they brought to the surface deposits of alum, lignite, sands and clays. This, in turn, laid the basis for the extensive exploitation of natural resources in the area and the resulting post-mining scenery. Today, through geotourism and other activities, the human impact on the environment is being positively transformed into an element of the sustainable development of the region.

The Muskau Arch Geopark covers 585 km² and offers lots of attractions: cycle tracks and hiking trails, two historic narrow-gauge railways, water tourism on the Lusatian Neisse, the museum and information points. The Muskau Arch region is not only a UNESCO Global Geopark but also has the status of a Landscape Park (Polish: “Park Krajobrazowy”) protected area. During the opening lecture held in our base in Łęknica City, we became familiar with the geological setting and the geopark’s structure. What makes it also special is the fact that another German–Polish UNESCO site is situated in the southern part of the geopark: the famous garden Prince Pückler Park Muskau.

One of the most outstanding places we visited during the summer school was the Former Babina Mine Geotourist Trail. Using the well-prepared cycling infrastructure, we were able to ride the whole length of the route on rented bikes, which of course brought even more fun and excitement. In the beautiful coniferous forest we found the partially hidden marks of collapsed subsurface mining chambers where lignite seams used to be extracted. An interesting natural phenomenon related to the lignite seams is the development of characteristic elongate valleys without water outlets, so-called Giesers. Due to glacial deformation, the lignite layers are steeply positioned and outcropped at the surface, where the weathering process of oxidation has worn away the rock. This led to the formation of morphological trenches full of moisture-loving or even boggy vegetation. However, the most remarkable features visible in the scenery are the coloured mining-relic lakes that are a result of the open-cast mining which started here in the 20th century. Some of them are reddish brown due to iron mineral mud; others are green due to algae. On the unconsolidated slopes of the lakes we could also observe the whole variety of erosional and sedimentological processes – a nice micro-scale field laboratory.

Another relic lake situated near Trzebiel Village in the area of the former ‘Julius’ mine was our destination on another day of the summer school. Since it is not yet part of the geotourist trail, there was a group discussion on how to properly manage the potential of this geosite. I especially enjoyed this brainstorm as a practical way to practise assessing geoheritage value – a skill that cannot be developed without field activities like this one. A similar exercise was conducted on the site of the biggest erratic boulder found in the Muskau Arch area: it is situated near Tuplice Village and is called The Devil’s Boulder by the local people. It is an excellent example how morphological elements can be differently interpreted from geological, historical or cultural points of view. For a geologist it is a gneiss with granitic veins, 5.1 m long with a weight of about 100 tonnes; it is protected by law as a monument of nature. On the other hand, archaeologists recognize it as a pagan and later Slavonic cult site.

An old Lusatian legend attributes the boulder to supernatural forces. Who knows, maybe it indeed was not brought by the Muskau glacier in the Ice Age, but by the devil, who wanted to impress the human woman he fell with love with. As erratic boulders used to be a widespread building material, their importance seems to be universal. Bearing this in mind, the local inhabitants should not have been surprised to see our group so excitedly touching and exploring the mosaic stone walls of the old ruined barns.



The creative use of erratic boulders still continues, as we could see while visiting the Lausitzer Findlingspark Nochten in the German part of the Muskau Arch area. The artificial landscape of the Park incorporates 7,000 erratic boulders magnificently accompanied by exotic vegetation. One of the expositions is even arranged as a material provenance map of Scandinavia, from where the glacier originated and brought the rocky material to the south of Europe.

It seems that the Muskau Arch area is an exceptional place to combine geology, gardens, and a human love story. We learned more about this when we came back to Łęknica City to eventually see the Prince

Pückler Park Muskau, where the beautiful Old and New Castles stand. Extending to 830 hectares in the valley of Lusatian Neisse as well as the adjacent plateau of the Muskau Arch, the park takes advantage of the local landforms. It was skilfully designed and built by the landscape gardener Prince Hermann Fürst von Pückler-Muskau in the 19th century, thus fulfilling his greatest dream. Listening to the story told by the park guide, we discovered that Pückler's wife was also fully devoted to his fantastic vision of the garden. In fact, such was her determination to succeed that when they both found themselves on the edge of bankruptcy, she suggested he divorce her and marry some other well-off lady for the sake of the park. We found this and many other charming stories embedded within the geology of the Muskau Arch.

On the closing day of the GECON Summer School, all the participants were invited to further explore the biodiversity of the area – an integral component of the Muskau Arch Geopark. As the last stop we visited The Centre of Forest Natural Education in Jeziory Wysokie and became familiar with educational exhibitions on the local forest wildlife and management. An interesting lecture was followed by a concluding discussion about the whole GECON event; the project's partners shared inspirations, ideas and future enhancements on trans-border co-operation in terms of geological heritage conservation.

The knowledge and practical skills gained by participants of the GECON Summer Schools – not to mention the many other long-term benefits – underlines the necessity of this kind of project. Experiencing the Muskau Arch UNSECO Global Geopark was truly a unique adventure which I highly recommend.

Spanish Journal of Palaeontology

Special issue dedicated to palaeontological heritage

by: **Enrique Díaz Martínez**

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The Spanish Journal of Palaeontology (SJP) has recently (July 2019) published a special issue dedicated to palaeontological heritage. This issue of the SJP collects different perspectives on fossils and palaeontological sites from the point of view of heritage and conservation. Palaeontological heritage includes those sedimentary deposits and fossils with high value, whether scientific, educational or recreational. As a type of geological heritage, paleontological heritage has some specific features such as including both movable elements (fossils) and sites, and the great attraction that fossils exert among the general public, which is partially responsible for the high risk of degradation that it presents by plunder. A peculiarity of its management in Spain is that it is linked to two different lines of official regulations: those derived from Law 16/1985 on Spanish Historical Heritage, and those derived from Law 42/2007 on Natural Heritage and Biodiversity (modified by Law 33/2015). Despite this legislative duplicity, or maybe because of it, paleontological heritage is quite threatened in Spain, since none of these laws has properly ensured the conservation of the palaeontological sites and the responsible use of their fossils. In addition, the need to comply with regulations incoherent with the real problems faced by palaeontological sites and their fossils, has frequently caused discomfort among palaeontologists, as well as the loss of opportunities for public use (research, education and tourism).

This special volume contains 16 articles that deal with aspects related to fossils as heritage, most of them raising the issue of management and conservation of this type of geological heritage. They may be grouped into two large sections: the first one includes articles that analyze how different countries and institutions legislate and face the management of fossil sites and collections, and the second section includes articles on specific fossil sites and collections.

All the articles are freely accessible through the link to issue number 1 of volume 34 in the journal's repository: <http://sepaleontologia.es/numeros-antiores-2/>

Many of the articles are in English, and all of them include an abstract in English. In the last World Conservation Congress, a resolution on the conservation of moveable geological heritage was approved by the General Assembly of IUCN (WCC2016 Res083: <https://portals.iucn.org/library/node/46500>), specifically considering paleontological heritage.

Update on Advances of Geoconservation towards the World Conservation Congress 2020

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One of the main reasons why ProGEO has decided to join IUCN as an international NGO member, and why we are investing our resources (time, money and efforts) into actively participating in this global organization, is the opportunity that it offers to influence national and international policies towards geoconservation. Since 2008 and during the last decade, we have managed to have several resolutions approved by this global environmental organization. This is important because all IUCN members are supposed to abide with those resolutions and we can use them as a lever in our countries.

Hence, it is important to clarify how the IUCN motion/resolution process works. During July and August 2019, there was a period of motion submission open to IUCN members. Then, during September and October 2019, a Motions Working Group (MWG) reviewed "all motions submitted for technical issues and the requirements laid out in the Rules of Procedure of the World Conservation Congress . . . On these grounds, the MWG will decide whether a motion will be admissible, with or without modifications, or rejected." At this moment (October 2019), we are waiting for the conclusions of this MWG.

Then, following the publication of the motions that have been accepted into the process, "all motions will be discussed online, prior to the Congress, during a period of 13 weeks, enabling all IUCN Members to participate in the process democratically, effectively and transparently. An electronic system for the online discussion will be live from 11 December 2019 until 11 March 2020 accessible via the Congress website. Members of all categories which are in good standing can voice their support for motions, express concerns, debate pros and cons and submit amendments using this system, just as they would during the Members' Assembly."

This period in early 2020 is when ProGEO members can and should be active, either as individuals or through their national representatives, in the process of lobbying in favour of the geoconservation motions. One possibility is to contact their National and/or Regional IUCN Committee (<https://www.iucn.org/about/members/national-and-regional-committees>), because they coordinate efforts nationally and can help in the distribution of the information and getting the support from national groups. A second possibility is to directly contact other NGOs at their national level (foundations, green parties, environmental groups, etc.) that are also IUCN members (<https://www.iucn.org/about/members/iucn-members>). A third interesting possibility, particularly if you are already in a government institution (university, geological survey, or local/regional administration) is to contact the national environmental or natural heritage agency or ministry, which will be representing your country as a governmental member of IUCN.



Finally, "following the online discussion, the MWG will put a substantial number of motions to an electronic vote by IUCN Members eligible to vote prior to the Congress. All motions voted electronically will carry the same importance as motions debated and voted at the Congress. The electronic vote of motions will take place over a period of two weeks, from 29 April 2020 until 13 May 2020"

Three motions related with geoconservation were submitted with the involvement of ProGEO. The first one, “Geoheritage, protected areas and Key Geoheritage Areas”, was presented by ProGEO requesting: i) the development of a detailed study envisaging the establishment of a future IUCN initiative – Key Geoheritage Areas – to protect geoheritage sites of global conservation significance, as a complement to the existing Key Biodiversity Areas programme, towards integrated nature conservation; ii) to collect, compile and publish data on geoheritage and protected areas; iii) to foster knowledge about geoheritage inside and outside protected areas, and to integrate nature conservation principles and methods in the management of protected areas to ensure the effective protection of this component of the natural heritage; iv) to establish or to improve national legislation concerning the protection of geoheritage, and to enable the necessary conditions to ensure the implementation of effective conservation measures.

The second motion, “Conservation of natural diversity and natural heritage in mining areas” was submitted by the Spanish Society for the Defense of Geological and Mining Heritage asking member states: i) to conserve mining areas, both underground and quarries, that have a relevant value for their natural heritage with possible scientific, educational, cultural and / or tourist uses; ii) to make inventories of the natural and cultural heritage resulting from mining activity, whether historical or current, and to take the necessary legal measures for its conservation; and iii) to include as a requirement in mining permits the need to restore the area by the end of the mining activity.

The third motion, “Bringing geological substrate, landforms and active geological processes into the management of protected areas” was presented by the Geological Society of Spain. It requests Member States to take initiatives so that the natural heritage in protected areas is truly managed holistically, considering all relationships between biological and geological elements. It also calls the World Commission on Protected Areas of IUCN; i) to promote in protected areas proper inventories, research, and adequate management and protection of the geological substrate, landforms and active geological processes that are the base of geodiversity; ii) to promote the incorporation of measures related with geological elements in Protected Area conservation policies; and iii) to challenge protected areas managers to enhance the information and proper interpretation of geodiversity in order to increase the awareness of visitors about all natural features inside protected areas.



In conclusion, it is during the online discussion that we should seek the support from other IUCN members (both national and international, either governmental or non-governmental) towards our motions and, of course, particularly during the online voting in May 2020, so these motions are approved and become resolutions.

Enrique Díaz-Martínez (current ProGEO Executive Secretary) with Inés López-Ercilla, of the IUCN Spanish National Committee, and Mark MacGuffie, IUCN member from the USA, at a lobby discussion of motions during the General Assembly, at the 5th World Conservation Congress in South Korea (2012). The help of other IUCN members and national committees, even during the discussion and voting at the General Assembly, was crucial in the motions process and adoption of IUCN Resolution 5.048 “Valuing and conserving geoheritage within the IUCN Programme 2013–2016”.

The next General Assembly will be held in June 2020 in Marseille (France).

X ProGEO Symposium

First circular

by: ProGEO

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The first circular for the Xth International Symposium of ProGEO is available.

The symposium will take place at Segovia (Spain), from the 8th to the 11th of June 2020, and is locally organised by the Instituto Geológico y Minero de España (IGME, the Geological Survey of Spain).

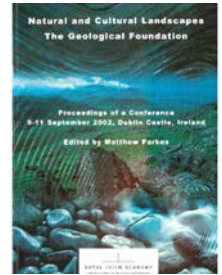
<http://www.igme.es/patrimonio/xprogeo2020/>



Natural and Cultural Landscapes. The Geological Foundation.

Proceedings of a conference 9-11 September 2002, Dublin Castle, Ireland

For anyone new to geological heritage who is trying to build up a library of past publications on the subject. Two copies are available free to a good home, preferably in a national institution where more than one person might make use of the book. Contact Matthew Parkes - mparkes@museum.ie



Deadline next issue of ProGEO NEWS

December 14th, 2019

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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14

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Editor: João Rocha ● joaorocha@uc.pt ●

Please send your contributions (unformatted word file 500 – 2000 words). Photographs, maps and figures should be sent as separated files (preferentially not included in the word file).

If longer texts are needed, please contact the editor.

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

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