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Two Thousand Years of History Written on Marble

Apuan Alps UNESCO Global Geopark, Italy

On 30 July 2021 the Geopark inaugurated the “Lapidarium Apuanum” (from the Latin *lapidarium* which means “concerning inscriptions on stones” and *apuanum* “of the Apuan Alps”). It includes a small archaeological collection of blocks and semi-finished products made of the worldwide renowned marbles from the Apuan Alps.


This collection displays unique finds that have been studied to offer a historical-archaeological insight into the evolution of techniques and organization of quarrying, covering a time span of 2000 years, from the Roman age to the present day.

The results of these researches on marble blocks and quarrying sites have been summarized in panels that accompany the visitor along the exhibition path. As an example, we show the panel relating to the marble block that tells the most complex and fascinating story (see Fig. 1).

This block was extracted during

the 2nd century A.D., known as the golden age of the Roman Empire when the classical culture was born. The great care in the processing and tracing of the block confirms the importance of its final costumer: the Emperor, as

the letters carved in marble tell us (see Fig. 2). Now we do not know why this block of white marble then remained in the quarry area where it was extracted. Other panels concern not only blocks with inscriptions and semi-



Lapidarium Apuanum

Square block with inscriptions

period: II century A.D.
material: ordinary white marble
origin: quarry n. 78 “Tagliata” - Masegla di Carrara
dimensions: 153(h) x 176 x 259 cm
shape: irregular parallelepiped with five faces rough-hewn using a stonecutter’s chisel and the remaining one hand-sawn; traces of the manual cutting trench from the bedrock can be seen at the base.

general description: quarry artefact with four Latin inscriptions (the first three on the front and the fourth on the back)

inscriptions:

Tib(urtinus) [or T(heo)D(orus)] C̄D̄XXCVII*
D(omini) N(ostri) C(aesaris) L[or 2]XV EPIN(icus)**
O(fficinae) V(eteris) [probavit]
ER(os) CAES(aris) [probavit]
EPINIC(us) [-?] L

*] = n. 487
 **] = n. 65 or 515

interpretation: this block was extracted from the quarry managed by Tiburtinus (or Theodorus) and was marked with the sequence number 487. It was then assigned to the Emperor with the number 65 (or 515, if written in Etruscan numbers) in a lot reserved for him. The production control was carried out by Epinicus and a further inspection was made by Eros on behalf of the Emperor.




Fig. 1: Example of panel in the Lapidarium



Fig. 2: Letters carved in marble block



Fig. 3: Renaissance semi-finished column in Medicea Breccia

the “Lapidarium Apuanum” are exhibited in the open spaces outside the Geopark Visitor Center of Equi Terme, which also houses the ApuanGeoLab, the interactive path of local and global Earth Sciences.

A stand of the ApuanGeoLab is devoted to the geological process of transformation from limestone to marble, and to the characteristics of beauty and workability of the marble from Apuan Alps, also known as Carrara marble, that make it particularly suitable for artistic use.

The Lapidarium is only the first step of a wider project aiming to use the Archaeology as further reading key of the protected area.

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finished marble architectural elements (column, capital, portal arch, see Fig. 3) but also about the ancient technique of block extraction, especially referred to Renaissance and Early Modern period. It was a manual and long-lasting process during which the quarrymen “cut” the marble starting from pre-existing fractures or cracks inside the rock to insert wedges in the cutting line up to splitting and detaching the block from the rocky bank (see Fig. 4).

The signs of this ancient quarrying activity are still visible in the landscape of the marble outcrop areas of the Apuan Alps (see Fig. 5).

The stone “monuments” of

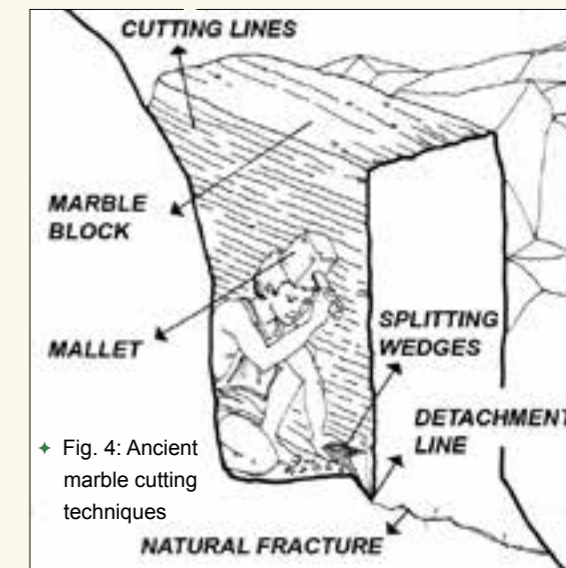


Fig. 4: Ancient marble cutting techniques

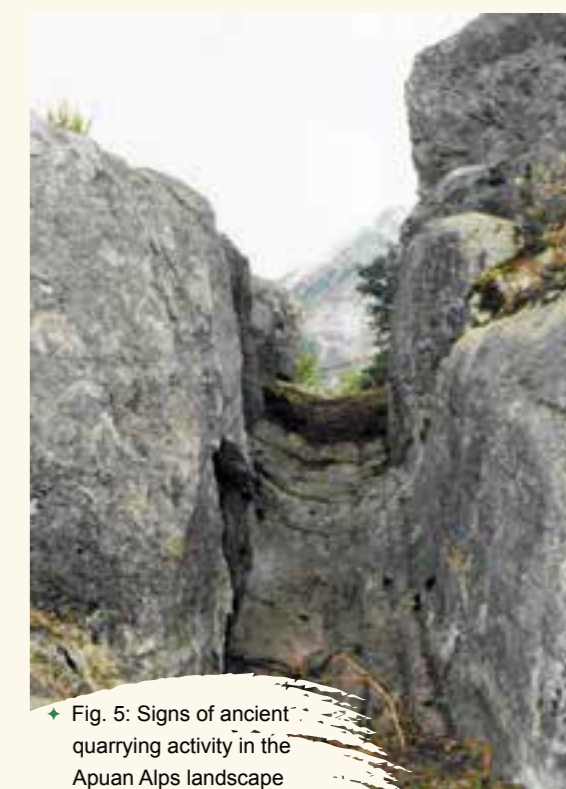


Fig. 5: Signs of ancient quarrying activity in the Apuan Alps landscape

Discover the Path of Light through the Stone

Djerdap UNESCO Global Geopark, Republic of Serbia

Visitors of the Djerdap UNESCO Global Geopark, Serbia had the opportunity to discover the path of light through the stone.

From August 18 to September 27, 2021, Djerdap UGGp hosted the exhibition "Transparent stone" which was realized in cooperation with the Austrian Cultural Forum Belgrade (ACF) and the Faculty of Mining and Geology, University of Belgrade (FMG-UB). The author is Prof. Dr. Kristina Šarić (FMG-UB) and associates at the exhibition are Dr. Adrien Feix (director of ACF) and Prof. Dr. Hans-Jürgen Gawlick (University of Leoben, Austria).

The exhibition "Illuminating



stone" invites visitors for two parallel journeys.

The first trip is a time machine through 150 years of Serbian-Austrian cooperation in the field of geological

research, which enabled a better understanding of the geology of the Alps and the Dinarides, a constant exchange of knowledge and researchers, as well as



making the first geological map of Serbia.

The second trip, on which we follow the path of light through the stone, was created thanks to the Austrian donation of a transmitted light polarized microscope to the Faculty of Mining and Geology in Belgrade in 2002. Namely, when the stone is cut into very thin plate which then is polished and modified to just a few hundredths of a millimeter thick, the stone comes to life – its minerals

start to allow the light through and the stone becomes transparent, revealing its mysterious beauty! In order to enjoy this phenomenon, apart from this thin plate, which is called a thin section, we need the mentioned microscope. It provides investigation of the optical properties of minerals created by the passage of linearly polarized light through them, which are permanently recorded on photomicrographs. These amazing images don't just provide information about

geology; they are also worth seeing as works of art of nature, as miniatures in which time has crystallized and thanks to which one can enter into a dialogue with human existence in a very unique way.

The exhibition was accompanied by a stone collection and a brochure. The opening of the exhibition was announced through flyers, posters and by posts on social networks of all participants.



Hotel Entô – a new geopark base facility where you can stay the night



Oki Islands UNESCO Global Geopark, Japan

Oki Islands UNESCO Global Geopark has four inhabited islands and over 180 uninhabited islands. The islands can be accessed by airplane or ferry, and a geopark facility is located in the ferry port on each island. Oki Islands are made up of two main regions called 'Dōzen' and 'Dōgo'.

Hotel Entô is located on Dōzen, which is a caldera created by volcanic activity around 6 million years ago. As a result of Earth's powerful natural phenomena, a place of magnificent landscape

and views was born. Dōzen's three islands - Nakanoshima, Nishinoshima, and Chiburijima - surround its very own inland sea. These three islands are part of the volcano's outer rim, and the gentle inland sea was formed due to sea water flowing in and filling up the sunken part of the caldera. Ama Town (Nakanoshima Island), which hosts hotel Entô, is one of the inhabited islands in the area.

This summer, Entô was opened on the island. It has two functions, as an accommodation and as a

base facility of the Oki Islands UNESCO Global Geopark. The hotel has two buildings, the main building called BASE which was renovated, and an annex called NEST, which was newly built. Both have 18 rooms, all with an ocean view. Some of the rooms have a terrace, so visitors can enjoy the views of nature and boats which connect Ama Town to the nearby islands.

In the NEST, there is an exhibition room which shows the geohistory and people's lifestyles



◆ Hotel Entô

of the Oki Islands. Visitors can understand and connect to the nature of the geopark through the exhibits. Geopark staff are stationed there to guide around the exhibition, which is open to all visitors, not only travelers from outside the Oki Islands but also its residents, with the goal of introducing the attractions of the geopark. Next to the exhibition is a lounge, where visitors can sit down and relax while enjoying the view of the Dōzen Caldera and the port outside the window.

Entô's construction concepts are "honest" and "seamless", which highlight how the hotel's construction is connected to the nature surrounding it, and how it tries to eliminate the border between nature and the building, and between the hotel facility and



◆ BBQ Seafood

the small town surrounding it. The hotel hopes to be a place which connects the hotel guests to town residents.

NEST was built using the CLT system (Cross-laminated timber). It is a new style of construction recently featured as an environmentally friendly and sustainable method, using prefabricated small panels made from timber from forest thinning to construct walls, roofs, and floors. It helps large scale construction in the remote islands since it does not require bringing huge timber and reduces the energy and

costs required for transportation.

The hotel has prepared items which are comfortable and friendly to the environment and people.

It serves only what is really necessary to stay. In choosing the items, the hotel considered it to be very important that guests can feel the connection to the Oki Islands when using them, and that the items have stories connected with locals. We hope that many guests will visit our hotel and enjoy their stay in the Oki Islands UNESCO Global Geopark.



◆ Geo Lounge inside the hotel



◆ Geo Room Discover - geopark exhibition

ObservaEstrela 2021

Estrela UNESCO Global Geopark, Portugal

The Estrela UNESCO Global Geopark has as its mission to contribute to the protection, valorisation and promotion of natural and cultural heritage, with special emphasis on geological heritage, in a perspective of deepening and disseminating scientific knowledge and promoting tourism and the sustainable development of Estrela's territory. In this sense, a wide range of actions for the Tourism area was promoted, which fit in the strategic lines defined by this Geopark. Taking into account the fundamental premises of this UNESCO classification, we can say that Tourism is one of the pillars of a Global Geopark, with its ability to generate wealth for the territories and contribute to their dissemination, promoting a better life for the local communities. In this context, actions were defined towards:

boosting tourism in the territory of Serra da Estrela; strengthening partnerships; contributing to the continuity of the Estrela identity; contributing to the creation of a strong tourism brand, based on the endogenous resources of the Estrela territory itself. As mentioned, tourism is one of the key areas for the development of UNESCO territories, seeking new approaches and strategies, especially around geotourism and sustainable tourism. Thus, it becomes important that a strong focus is put on the consolidation and expansion of what is the tourism activity of this territory, involving communities and generating collaborative networks. As part of its tourism strategy, this Geopark promotes a set of events that aim to contribute to the construction of a strong tourism brand, based on the promotion of different types of tourism: nature, scientific,

educational and health and well-being. In this context, the ObservaEstrela was created, with the main objective of promoting landscape and sustainable development, contributing to a greater knowledge about the territory and its resources. In order to value the territory and its heritage, the Estrela Geopark promoted the 3rd edition of the ObservaEstrela festival with a diversified set of activities for all ages, leveraging a new dynamic for the territory and the Estrela mountain range. The ObservaEstrela aims to promote the relationship between tourism and science in an integrated manner, focusing on the natural and cultural values of the highest mountain in mainland Portugal. Given the current pandemic situation, the 2021 edition of the ObservaEstrela was held in a mixed format,



through the promotion of online workshops and masterclasses, face-to-face activities with schools, the creation of various digital, educational and tourist resources, a photographic exhibition and field trips, seeking holistic approaches to the issues of landscape valorisation and

sustainable development. This year's ObservaEstrela is associated with SDG 15 – Life on Land, of the 2030 Agenda. Like this SDG, this event also aims to address some of the concerns existing in mountain territories, namely the conservation of mountain

ecosystems and the promotion of the sustainable management of natural resources. Participating in this event is a way to learn more about the territory and consequently to value it, because you can only value what you really know!

Intelligent Monitoring System Helps Conservation of Mt. Danxiashan Biodiversity

Danxiashan UNESCO Global Geopark, China

With the support of Forestry Administration of Guangdong Province, Danxiashan Administrative Committee has developed a wildlife monitoring system under the guidance of School of Life Sciences, Sun Yat-sen University, for the purpose of developing Mt. Danxiashan Intelligent Reserve. 100 sets of infrared cameras and 2 sets of black light ballhead automatic monitoring equipment are installed in the reserve to make all-weather monitoring of wildlife. In the three months since the system was established, a large number of precious wild animal, mainly beasts and birds, have been captured, showing the ecological value of Mt. Danxiashan.

According to preliminary identification, 29 species of mammals and birds have been monitored by August 10, 2021, with 691 valid photos. A variety of national and provincial protected animals have been monitored,



Artamus fuscus ©Xie Qingwei

including many rare animals protected by law like prionailurus bengalensis, prionodon pardicolor, lophura nycthemera, pitta nympha, etc.

The project team is analyzing the data to better understand the population, distribution and living habits of wildlife in the

reserve, so as to more accurately conserve wildlife and biodiversity. By August 2021, 224 species of birds have been observed within the range of Mt. Danxiashan. Compared with the same period last year, 56 new species of birds have been recorded, with an increase of 33% in one year, representing that the monitoring skills of the staff in the reserve have been significantly improved.

During the three-month monitoring, the over 100 equipment installed in the buffer zone and core areas have not recorded any human entry and



Muntiacus muntjak is eating Ganoderma lucidum

no phenomenon of wild animals poaching and wild plants picking have been found, which shows that the awareness of ecological conservation of the local people

in Danxiashan UGGp has been significantly enhanced. They are conscientiously abiding by the laws and regulations of the geopark, and have become the

defender of biodiversity and geological heritages.

Li Guiqing & Xiao Wei
Danxiashan UGGp, China



Pitta nympha



Muntiacus muntjak



Bambusicola thoracica



Prionailurus bengalensis



Lophura nycthemera



Prionodon pardicolor

Science Program on Parents-child DIY Campaign



Huanggang Dabieshan UNESCO Global Geopark, China

On 30th and 31st, July, Huanggang Dabieshan UNESCO Global Geopark held two science popularization programs on DIY family campaigns jointly with its geopark museum and one of the local communities respectively.

More than 35 families joined the programs.

Huanggang Dabieshan UNESCO Global Geopark has two sister mascots, which derived from its rare animals and plants, musk deer and rhododendron. Different from traditional programs before, this DIY campaign focused on scientific story telling and DIY painting. During the program, stories about Huanggang Dabieshan and its mascots were told, so that children could have a clear understanding of its geopark and were impressed by the two lovely geopark mascots.

After class, children worked in groups and took an active part in painting mascots on geopark

promotional bags. By combining with their own imagination and stories taught in class, different geopark mascot images were painted. Parents attended all speak highly of this program and hope that more DIY programs

with different subjects could be launched in future to increase their children's sense of

participation, interaction and pride.



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2021年丹霞山全国科普志愿者训练营



Opening Ceremony of 2021 Danxiashan UGGp Science Popularization Volunteers Training Camp

2021 Danxiashan UGGp Science Popularization Volunteers Training Camp Held

Danxiashan UNESCO Global Geopark, China

On July 29, the Opening Ceremony of 2021 Mt. Danxiashan UGGp Science Popularization Volunteer Training Camp was held in Danxiashan Museum. Over 40 people including officials of Danxiashan Administrative Committee, representatives of previous outstanding science popularization volunteers have attended the ceremony.

More than 30 volunteers were

newly selected from more than 1,000 applicants, including teachers and students from Sun Yat-sen University, Wuhan University etc. and science popularization enthusiasts from governments like Guangdong Environmental Conservation Publicity and Education Center and academic journals like Journal of Palaeogeography.

The event lasts five days from July 29 to August 2. Under the

direction of Danxiashan science advisors, science tutors and local science popularization enthusiasts, the new volunteers have systematically studied the geology, geomorphology, biodiversity, cultural relics of Danxiashan, and realized the development of science education in the Geopark, through lectures and field studies.

In the field study trip, the volunteers have experienced

Danxiashan Science Popularization Line 1 to 8 and science popularization courses. They have deeply communicated with the staff of Danxiashan Administrative Committee and local residents on the protection of geological heritages and the sustainable development of community livelihoods, so as to deeply understand the development and industry of science popularization in the Geopark.

"I have been to Danxiashan before, but I only felt that it is a place only for tourists. After participating in the training camp, I found that Danxiashan has so much value for science education, and the observation class at night is very exciting and interesting." a volunteer said after the first training day.

Danxiashan UNESCO Global Geopark Science Popularization Volunteer Training Camp is initiated by Danxiashan UGGp which aims to promote the popularization of geoscience. Since it start in 2014, the event has been continuously upgraded. At present, it has cultivated more than 600 science popularization volunteers, which has become a good model for promoting science education in protected areas in the world. The case of Danxiashan science popularization volunteers was invited to be showed at the 44th session of the World Heritage Committee of UNESCO as a global innovative case.

Li Guiqing & Xiao Wei
Danxiashan UGGp, China



◆ Observing insects at night



◆ Field study trip on biodiversity



◆ The tutor is explaining the cause of geomorphology



◆ Field trip on geology

Cross-Curriculum Education Program Based on Geopark at Local High School



Muroto UNESCO Global Geopark, Japan

It is predicted that a major earthquake in the Nankai Trough is occurring in the next 30 years from about 70 percent to 80 percent around Muroto UNESCO Global Geopark (MUGGp, hereafter), located in Kochi Prefecture, Shikoku Island. Geohazard risk management, therefore, is the most urgent challenge for local citizens in MUGGp.

Muroto High School (MHS, hereafter), the only high school in MUGGp, works passionately for the topic since FY2017 when Disaster Reduction Committee, composed of students were launched at school. MUGGp and MHS have worked together with aims of 1) raising local's awareness on geohazard risk management, and 2) suggesting more effective ways for evacuation to leave no one behind.

Ensuring an environment for students to learn and understand about the issue comprehensively,

MUGGp and MHS started a collaborated education program on geohazard risk management and incorporated the program into classes.

School teachers tend to recognize that Geopark is about science, mainly as geology or geography. MHS, on the other hand, acknowledges that

Geopark covers not only science but also other subjects and can accelerate cross-curriculum education program. In this school year, mathematics class collaborates with Geopark for geohazard risk management research program; 1) students analyzing data given from past earthquake's results and a



◆ Holding field excursion to check evacuation route



◆ Reporting research results at city hall

launched on trial base: Social Welfare class and Geopark works to develop universal-designed guided tour for persons with visual impairment. Next challenge of this collaborated education program is to expand school subjects working with Geopark.

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current hazard map issued by the prefecture to find evacuation time, and 2) holding an evacuation drill to verify their analysis by using actual evacuation route and facility with Geopark staff and researchers. The research activities at math class made a video about the research results which was awarded by International Day for Mathematics competition (QR code to see the video).

MUGGp has a local, regional, and international networks therefore it can work as a bridge between MHS and those networks. MUGGp can arrange to collect references and conduct interviews with Muroto City Division of Disaster Prevention or a local voluntary organization of disaster prevention. MHS also utilizes Global Geoparks Network to share their research results

with schools in other UGGps both onsite and online. Sharing experiences with others is always the key to develop research activities for students. Geopark works very effectively in that point.

At MHS, more and more cross-curriculum education programs based on Geopark have



◆ QR code to see a video



◆ Online exchange class with Langkawi

Zhangjiajie Global Geopark Organized Geo-science Popularization Lectures

Zhangjiajie UNESCO Global Geopark, China

On the morning of December 23, 2021, the administrative office of Zhangjiajie UGGp organized three geo-science popularization lectures in the lecture hall of the newly upgraded geopark museum, under the support of Education Branch of Wulingyuan District and the district's Tourism Vocational School. Mr. Liu Baoan, an expert on world heritage in the National Forestry and Grassland Administration of China, Mr. Huang Heqing, a professor of geomorphology in the Institute of Geographic Sciences and Natural Resources Research of Chinese Academy of Sciences and director of Research Center for Zhangjiajie Geomorphology, and Ms Li Jingyu, a Ph.D candidate at University of Groningen of the Netherlands offered very interesting lectures.

From the concept of

world heritage conservation, geomorphic characteristics and scientific significance of Zhangjiajie UGGp, and the relationship between geo-heritage protection and sustainable development, three speakers provided detailed and yet understandable explanations

on the main features of World Heritage Sites in China, the formative process and scientific significance of Zhangjiajie Landscape, and the ideas and measures of sustainable development of communities in Zhangjiajie UGGp, to more than 100 teachers and students from



Tourism Vocational School of Wulingyuan District.

These lectures, on the one hand, led teachers and students further understand the importance of world heritage conservation and the characteristics and formative distinctiveness and systemic integration of Zhangjiajie Landscape, and so deepened their understanding of the scientific value of Zhangjiajie Landscape. On the other hand, they further

promoted the concept of conservation and development in the management of global geoparks and consequently strengthened the understanding of the teacher and students on the sustainable development of communities in Zhangjiajie UGGp. Zhangjiajie UGGp has been organizing geo-science popularization activities at various times, which have been warmly welcomed by teachers and students.



Online Exchange between Huanggang Dabieshan UGGp, China and Mesopotamia Geopark, Turkey

Huanggang Dabieshan UNESCO Global Geopark, China

As we all know, the GGN founded in 2004 is a dynamic network where members are committed to work together, exchange ideas of best practices, and join in common events to raise the quality standards of all products and practices of a UNESCO Global Geopark.

At the request of Mesopotamia Geopark, Turkey, to get some advices and learn from experiences (before/through/ after) the application process from Huanggang Dabieshan UGGp and other UGGps in China, an online Geopark Exchange Meeting was held on the afternoon of 2 Sept. Supported and involved by Chinese Geoparks Network, Danxiashan UGGp, Shilin UGGp, Wudalianchi UGGp, Tianzhushan UGGp and Xiangxi UGGp, more than 25 colleagues participated the meeting.

The webinar begins with a brief introduction and some beautiful pictures and then a presentation given by Dr. Hellen & the field coordinator Mrs. Ceren Ilter from Mesopotamia Geopark, Turkey. What comes last is free discussion. In this session, stakeholders, consultant professors from the UNESCO national committee of Turkey take an active part in it, questions

about Geopark boundaries, management structure, etc are put forward so as to solve some problems facing right now by Mesopotamia Geopark, Turkey.

By question and answer, 6 coordinators from Chinese Geoparks share opinions about management, financial budget, Mentorship and Knowledge Exchange Programme, etc. and invite Mesopotamia Geopark. Dr. Hellen from Mesopotamia Geopark, Turkey said, "Mesopotamia Geopark is a

baby geopark and needs a lot of work to do, and we would need your help and support in many aspects!"

This webinar is not only a chance to promote Chinese Geoparks Network, but also an example to carry out the mission within geoparks network to cooperate and to communicate. It's a sign to show that although we all has suffered from the COVID-19, but we always work together and help each other under the framework of UGGp.

Mesopotamia Geopark covers an enormous size of land, including the volcanic Karacadağ mountain, in addition to wide number of Geosites, located in southern Turkey, in the famous land of Mesopotamia, and are planning to go through the process of UGGp application next year.

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A web Portal to Showcase the Pedrera de Meià paleoheritage



Orígens UNESCO Global Geopark, Spain

The Orígens UGGp has recently released a web portal showcasing the exceptional Lower Cretaceous fossil record in la Pedrera de Meià in the Montsec Range characterized as Konservat-Lagerstätten.

The Montsec Range in the southern sector of the Orígens UGGp presents two lacustrine sediments outcrops in disused

lithographic limestone quarries. These Konservat-Lagerstätten outcrops present extraordinary preservation of fossilized life forms especially where the soft parts of the body are preserved. Such preservation requires of very particular conditions like anoxic environments with fine sediments that allow the preservation of casts and films

of delicate soft parts as well as rare coloration patterns. In this deposits, some examples of the magnificent fossils found on this site are insects, marine invertebrates, plants and vertebrates such as amphibians, and even feathered birds. Among these stands out the fossil record of the first flowering plants (*Montsechia vidalii*), which appeared on the planet about 130 million years ago.

The web portal <https://pedrerademeia.geoparcorigens.cat> together with the recently opened Montsec de Meià Interpretation Centre will partner together on the divulgation of this magnificent fossil record at all levels: scientific, educational and touristic.

The project is driven by the Catalan Palaeontology Institute, the Orígens UGGp and the "Institut d'Estudis Ilerdencs"



✦ Lower Cretaceous paleoenvironmental of the lacustrine basin where the Pedrera de Meià limestones formed. Illustration by Berta L. Millán.

with the objective of offering the richness and significance of this exceptional collection to both, the public and the scientific community. It is envisaged that providing scientist with this collection will open a wide range of possibilities for new research. Other project objectives include contributing to the educational programs of the Paleontology schools at a global scale and boost the dissemination of this exceptional fossil record as well as the history associated with its discovery.

The web portal is available in Catalan and Spanish and is projected to add an English version. It is structured in four parts that focus on the following: (1) the outcrops and their geological context; (2) the history around the discovery of the sites and the campaigns recorded to date; (3) the digital repository with images and descriptions of the samples and, (4) the most relevant scientific and lay publication references.

Showcasing fossils spread on 12 European museums

The quarries have been visited by scientists around the globe since late 1800s and today there are over 8000 fossil

samples catalogued and spread on twelve European museums, among which there are the Natural History Museums of Paris, London, Berlin, Madrid or Barcelona. The exceptional fossil record includes 114 holotypes of birds, reptiles, amphibious, crustaceans, fish and plants, which means that 114 species were first formally described from

samples discovered in these outcrops. The web portal will act as a digital repository and aims towards the inclusion of the 8000 images and descriptions of the samples held in the different museums of Europe.

Xavi Mir

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✦ Two examples of holotypes recorded in the outcrops *Cretobestiola Hispanica* (left), *Ilerdopteryx viai* (right). Images provided by the Institut d'Estudis Ilerdencs.



✦ The web portal aims to act as the digital repository of the fossils held in twelve Museums across Europe



➤ Dream-like Ruqin Lake © He Lixin

Cooperation across the continents during the Pandemic

Bergstrasse-Odenwald UNESCO Global Geopark, Germany

In Pandemic times, we are asked to develop creative options for cooperation – inside our regions as well as international.

In this context, Bergstrasse-Odenwald has developed a photo exhibition with 20 winner photos from a photo contest

for citizens under the motto “My view into the Geopark” and 20 extraordinary photos from Mt. Lushan UNESCO Global Geopark, longstanding sister Geopark since 2007.

The exhibition was installed in a west-east oriented exhibition

hall, the virtual bridge between west and east was visualized by a series of 36 photos of the longstanding friendship between the two Geoparks, which goes back to 2007.

The exhibition has been opened on April 30th in both

Geoparks in German/English and Chinese/English with video messages from the respective Geopark presidents.

Due to the Pandemic, a video and a 3D tour were available as a first taste of the exhibition. Later on, the exhibition centre was open and it was possible to visit the exhibition.

Bergstrasse-Odenwald UNESCO Global Geopark (Germany), and Lushan UNESCO Global Geopark (China) have developed and distributed their geo-tour maps and promotional booklets to visitors in Europe and China. These maps include local photographers’ photos of location of geo-sites. These materials give the visitors a glimpse to the cooperation and friendship across two continents. In Lushan UGGp, the international photography exhibition was held for over three months (end of April to peak season in summer).

Bergstrasse-Odenwald UNESCO Global Geopark (Germany): Discovering 500 Million Years of Earth History, Nature and Culture

The landscape of the Geo-Naturepark is steeped in history and covers an area of 3800 km² between the rivers Rhine, Main and Neckar, which is just waiting to be explored. This highly diverse natural environment unites over 500 million years of dynamic Earth history with a culture dating back thousands of years to a unique and distinctive identity.

Our Geopark-Trails and Geopoints draw attention to geological highlights, interesting habitats in our natural environment and the varied culture and history of our region. The Entrances, Information Centres and Environmental Education

Stations focus on specific topics and provide a full range of information materials for your own trips and explorations. Our geopark rangers and local geopark guides present exciting insights into the multifaceted landscape and its evolution.

As a part of our regional partner network as well as UNESCO Global Geopark in the worldwide Global Geoparks Network we are set on preserving our geological, natural and



➤ Virtual-opening



➤ Exhibition-poster

cultural heritage for us and future generations. In our capacity as a Global Agenda 2030 model region, we also support the objectives of the global community for a sustainable and peaceful interaction with our planet.

Lushan UNESCO Global Geopark, China

Lushan UNESCO Global Geopark is located in the northern part of Jiangxi Province, with the Yangtze River, the longest river in China, to her north and the Poyang Lake,

the biggest fresh water lake in China, to her east. It covers an area of 548 km². She was inscribed as one of the first members of Global Geopark Network in 2004 with world-class

geo-heritage sites, and the first Chinese world heritage cultural landscape in the UNESCO World Heritage list in 1996.

Mt. Lushan is one of the spiritual centres of Chinese civilization and the birthplace of Chinese Quaternary Glaciation Theory.

Landmarks of Confucianism, Buddhist and Taoist temples, along with Chinese and western architectural styles villas blend effortlessly into a strikingly beautiful landscape which has inspired countless artists who developed the aesthetic approach to nature found in Chinese culture.



Overview of Lushan



Overview of bergstrasse-odenwald

The partnership: UNESCO Global Geoparks Bergstrasse-Odenwald and Mount Lushan: “Closely linked in friendship across space and time”

This is the motto of the partnership that has existed between the two UNESCO Global Geoparks Bergstraße-Odenwald (Germany) and Mount Lushan (China) since 2007. It has been immortalized in Chinese calligraphy on a special gift from our partner Geopark – the large friendship stone from Mount Lushan, which decorates the square at the museum centre in Lorsch in the German Geopark.

The partnership is one of the first, most enduring, and liveliest in the global network of UNESCO Global Geoparks and has been continuously enlivened in numerous different ways for many years. The projects range from workshops and scientific exchange through friendship

stones in the respective partner Geoparks, joint conferences, or the first international woodland art trail in China, to exhibitions like the major Geopark exhibition in Lushan or the peony art exhibition in Lorsch.

A new highlight of the cooperation is the joint exhibition “West-Eastern Impressions” with extraordinary insights into the wonderful landscapes of both Geopark regions. In homage to the peony artists from Mount Lushan and also to the local partners, the UNESCO World Heritage monastery of Lorsch

and the town of Lorsch with its peony garden – which is one of a kind within Germany – several examples of the exhibition pieces accompany the photographic insights into the longstanding cooperation of the two UNESCO Global Geoparks.

Both Geoparks consider this exchange as an extraordinary chance for cooperation and support according to their motto “closely linked in friendship across space and time”- in the regions themselves and also beyond the borders of countries and continents.

Jutta Weber

Managing Director of Bergstrasse-Odenwald UGGp, Germany

Huang Tao

Geopark Section Chief of Lushan UGGp Management Office, China



Kreidacher hoehe © Rita Eberle wessner

Tik-Tok Competition Themed “Visual Geology · Ecological Longyan”

Longyan Aspiring UNESCO Global Geopark, China



◆ The awarding ceremony



In order to fully display geo-heritages, beautiful scenery, cultural landscape in Longyan Aspiring Global Geopark, excavate its geological scientific significance, rare natural attributes and high aesthetic value, and play a good publicity for the creation of Longyan UNESCO Global Geopark. Longyan Geopark Management Committee and Longyan Forestry Bureau jointly held 2021 Longyan Geopark Tik-Tok Competition-“Visual Geology·Ecological Longyan.”

This competition was open to the public to collect original works, and guide them to use the current popular Tik-Tok short video transmission method for video production, themed by rich geo-heritages, geological landform, ecological resources, cultural deposits and related industries, etc. so as to show the unique charm of Longyan Geopark. After two months of collecting works, the competition organizing committee received a total of 153 entries, which

were broadcasted 6.003 million times in Tik-Tok App. In the review session, the expert team comprehensively reviewed the entries according to the theme, content and creativity, combined with the number of likes, comments and reposts, and then got their corresponding scores according to the weight coefficient. According to the comprehensive scores, the final selection of 27 award-winning works, Including 1 first prize, 3 second prizes, 3 third prizes and 20 excellent prizes,

were released to the public. The organizer specially held an award ceremony to issue award certificates and bonuses to the winners. This competition promotes Longyan Geopark through short videos that are popular among the public, attracting more people, especially young people to know and pay more attention to Longyan Geopark, which has achieved good results in improving the visibility and awareness of Longyan Geopark.

Lin Wensheng
Longyan aUGGp, China



◆ The poster

◆ Entries of the competition

The Geopark Museums



Molina & Alto Tajo UNESCO Global Geopark, Spain

Geotourism encompasses recreational activities with cultural and educational purposes, the interpretation of heritage, promoting research and generating knowledge. Knowing, interpreting, discovering, enjoying, appreciating and conserving are the adjectives of Geotourism.

The Molina region has a natural, historical and cultural heritage, elements of geological interest and unique flora and fauna.

The need to make all this heritage accessible, leads us to the creation of infrastructures in the

territory of the Molina-Alto Tajo Geopark.

Starting from a basic analysis of economic, social and environmental impacts and contributing to the quality of life of the local population in the destinations where these Interpretation Centers are to be developed, ultimately local development.

As an example of all this, some of the infrastructures are described, in this case interpretation centers, promoted in the northern part of the territory as a complement to the nature tourism represented by the Alto Tajo Natural Park.

Museum-Center of Interpretation of the GSSP Stratotype of Fuentelsaz

Its purpose is to highlight the importance of this site, considered by the International Union of Geological Sciences (IUGS) as the most continuous paleontological record in the world on the transit between the lower and middle Jurassic. The Fuentelsaz Stratotype was the first in Spain to be recognized as a Global Boundary Stratotype Section and Point (GSSP) by the International Stratigraphy Commission (ICS) integrated in the IUGS. It was proposed in 1994, accepted in 1998 and ratified in



◆ Museum-Center of Interpretation of the GSSP Stratotype of Fuentelsaz

2000, during the 31st International Geological Congress held in Rio de Janeiro. It was competing with another section for the same limit, located in Wittnau, in Freiburg (southern Germany) and to break the tie, 32 specialists had to move to the place. It is, therefore, one of the great jewels of the Spanish geological heritage and this Interpretation Center allows you to discover its importance and value.

In addition to the Fuentelsaz GSSP Stratotype Interpretation Center, the site aims to be a museum that reveals the richness of the archaeological heritage of the area, based on the Neolithic and Celtiberian sites found in the municipality, so that the visitor you will be able to make a journey from 175 million years ago, until the 2nd century AD.

Museum of Cubillejo de la Sierra

The Torreón de los Ponce de León was built on a rocky mound in the 12th century with a defensive function, since from there the lands of the family property were controlled. The building, which is two stories high, has a lintel door of great beauty. On it you can see a stone carved with a legend that tells the passage through Cubillejo de los Ponce de León, as is also demonstrated in the imposing family shield that is seen on its facade. This building was ceded by the Molina City Council to the "Sierra de Caldereros" Cultural Association, who has rehabilitated and recovered it as a Historical Museum.

Conceived in a very didactic way, this museum allows to know all the history of the town, as well as its monuments (parish church, pairones, hermitages, traditional oven, Celtiberian and



◆ Museum of Cubillejo de la Sierra

Visigothic town, traditional architecture, etc.), all through easy-to-read murals, inviting a simple walking tour to get to know them on the spot.

Regional Museum of Molina de Aragón

Molina de Aragón has a surprising and complete museum dedicated to the Evolution of Life, in the rooms that corresponded

to the Chapter House and the Cloister of an old Franciscan convent. Throughout the visit you can enjoy a complete collection of minerals and fossils, including ammonites and trilobites, but also ancient reptiles and dinosaurs, some even large. In the fauna and entomology rooms many of the species of animals and insects that inhabit the forests of the region are recognized. The visit ends with the man, in the Human Evolution Room, designed by the Atapuerca team through the Ancestros Foundation and inaugurated in May 2012 by the paleontologist Juan Luis Arsuaga, which is complemented by the archeology room located in the upper gallery. In



◆ Regional Museum of Molina de Aragón

In addition, it has a temporary exhibition hall in which various local and provincial artists present their works. The Museum also organizes other types of cultural activities such as fairs, exhibitions and concerts, and acts as a reception center for visitors to the Geopark.

Palaeontological Museum "El Mirón" of Maranchón

The building of the old forge, rehabilitated by the town council, houses this incredible Paleontological Museum that collects a sample of the fauna of the sea that flooded this area during the Jurassic, 200 million years ago. The Museum, owned by the municipality, has received the name of the hill where an important part of the various fossil specimens (ammonites, belemnites, bivalves, etc.) from the private collection of some residents of Maranchón, Gerardo Lacasa and Begoña Oter, appeared. The exhibition is made up of more than 1,300 fossils and is complemented by a generic sample of other geological periods and explanatory panels that unravel, in a simple and didactic way, the evolution of life on Earth.

Hombrados Open Museum

In other times they occupied the eras, the fields, the workshops and homes of our towns and today they return to the streets of Hombrados. Nine booths and some uncovered points, distributed through different streets of the town with explanatory posters so that the visitor knows the operation of the agricultural machinery of the last 100 years and people can get an idea of what they were used for.

The need for infrastructure, accessibility, landscape, companies in the sector to develop one of the strategic lines of work.

Highlight the importance of generating infrastructures like these, as part of the commitment to continue structuring the northern part of the Molina Region, outside the limits of the Alto Tajo Natural Park.

The population has to settle in the territory and be aware of the values they possess, promote them, protect and encourage their study and scientific dissemination.

María Viorreta

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Huangshan Researches and Practices on Integrated Management of UNESCO Multi-designations to Enhance their Value

Huangshan UNESCO Global Geopark, China

So far, UNESCO has approved 1154 World Heritage Sites, 169 Global Geoparks, and 727 World Biosphere Reserves around the world. There are 8 protected areas with all the three designations at the same time in China, including Huangshan. These protected areas are not only the most prominent representatives

of natural and cultural values but also outstanding models of heritage protection, management, and sustainable development in the world.

What we realized is that the three designations can not be developed in isolation, and we should strengthen experience exchange and case sharing among UNESCO multi-

designated sites. Another thing is within multi-designated sites, it is necessary to promote connection and coordination among different designations, so as to enhance the efficiency and ensure the authority of UNESCO designations.

One of the evaluator's recommendations on our third revalidation in 2016 is that it





is necessary to distinguish the difference between our World Heritage and our Global Geopark. To deal with this issue, Huangshan has applied for geopark extension to distinguish the boundary difference between the two designations. On the other hand, theoretical research and practical exploration of integrated management of multi-designations are carried out with a focus on the management objectives of World Heritage, Global Geopark and World Biosphere Reserves, combined with the hot spots concerned by UNESCO and the objective needs of Huangshan,

There are three purposes to carry out the research and practice of integrated management of UNESCO multi-designations. The first is to improve efficiency. Coordinating management indicators of the three designations to cope with

the challenges brought by multi-designations in management, and to improve the efficiency of multi-designations management. The second is to enhance protection. We are doing correlation research on the protection objectives and values of the three designations, and carry out systematic protection of mountains, rivers, forests, fields, lakes and grasses bearing the value of these designations. The last one is to promote development. Using the three designations as a connection to build an exchange platform for integrated management of multi-destinations, we actively participate in the governance of international nature reserves, and expand the international influence of Huangshan. Eventually, it is to implement the criteria(iv) for UNESCO Global Geoparks and the value and performance of UNESCO

designations.

We've done a series of work on this issue. Through the establishment of an expert advisory committee, we carry out integrated management research, including research on the value relevance and indicators of these designations, jointly initiate the establishment of the Forum for UNESCO Multi-designations Sites(FUMs), hold exchange meetings on integrated management, and build a comprehensive display system and monitoring system, excavate the value relevance among Huangshan's designations, coordinate evaluation indicators of the

three designations. We use integrated management to improve efficiency, strengthen protection and promote development.

This year, encouraging progress has been made in the research and practice of our integrated management. At present, the Forum for UNESCO Multi-designations Sites has held 6 video meetings to exchange experience with multi-designated areas from China, Italy, South Korea, and other countries. The research on integrated management of Huangshan gets UNESCO seed funding support. Relevance research on Huangshan's natural

value has published two SCI papers, and the research results have attracted the attention of international peers. And we are invited to share our research experience on integrated management at the UNESCO training course on Biosphere Reserves in Northeast Asia, seminars organized by Russia, Malaysia and other countries, annual conferences, and training meetings of domestic industry. Our education project of Huangshan Nature Lecture, which aims to jointly promote the heritage value of Huangshan, was selected as the only case in China into ten good examples and practices of climate change

mitigation and adaptation in UNESCO Global Geoparks.

Next, Huangshan Global Geopark will continue the research on the value relevance and integrated management of UNESCO designations, start the preparation of the integrated management plan of Huangshan, continue the establishment of the Forum for UNESCO Multi-designations Sites, and formulate integrated management mechanism of Huangshan.

Li Wei

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TRUYỆN THUYẾT NÂM BLANG THE TALE OF NAM BLANG



1

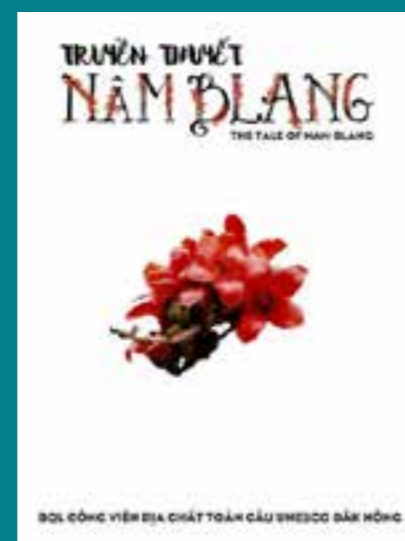
International Day of the World's Indigenous Peoples 2021

BỘ LÃNH ĐẠO
CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
ĐƠN VỊ CÔNG VIÊN ĐỊA CHẤT TOÀN CẦU
UNESCO ĐẮK NÔNG - NĂM 2020

Dak Nong UNESCO Global Geopark, Viet Nam

Dak Nong is a land rich in traditional culture of the indigenous M'ngong, Ma and Ede peoples. Their valuable tangible and intangible cultural heritage, especially their unique flows of folklore throughout from the past to the present and towards the future, is an outstanding symbol of the local ethnic communities' lives. From primitive stone tools together

with volcanic caves that were once inhabited by prehistoric people, from fossilized areas of ammonites that proves this land once was part of the ocean million years ago to the historical vestiges of the revolution, all together makes this land a place to preserve geo-cultural heritage of both historical and aesthetic values, bearing the imprints of three ethnic groups residing



earliest in this land – M'ngong, Ma and Ede - to pass down to later generations.

In order to celebrate the International Day of the World's Indigenous Peoples 2021, we have made some field trips to collect a number of interesting tales and legends related to the names of heritage sites. Each site has its own historical and cultural origin. Thereby, the local ancients have explained the natural phenomena related to the heritage and its influence on their life. These are useful documents for reference and research in order to preserve and promote local heritage values of the Geopark.

Hundreds of folk tales are collected in association with hundreds of heritages within Dak Nong UNESCO Global Geopark, which shows the rich and diverse indigenous residents' knowledge. However, in the framework of the Tale of Nam Blang, we would like to introduce some local typical stories and legends. Hope this will be a small gift to get visitors closer to Dak Nong UNESCO Global Geopark.



Science Popularization Camp for Children of Danxiashan Employees Held

Danxiashan UNESCO Global Geopark, China

A science popularization camp for the children of Danxiashan Employees was held by Danxiashan Administrative Committee on August 17, 2021, with the theme of "Danxia is my home · National Treasure Guardian". More than 50 children of the employees from Danxiashan Cable Car Co., Ltd., Doctor Ecological Park Co., Ltd., Danxia Bus Co., Ltd. have attended. The event aims at deepening the children's understanding of the scientific value of Danxiashan and the value of their parents' position in the Geopark, enhancing their consciousness of loving Danxiashan and conserving nature.

During the three-day camp, the children have visited the natural scenery of Danxiashan, learned about biodiversity and Danxia landscape. They have carried out sedimentation experiments, observed birds, stargazed, painted, took notes of nature and provided voluntary service.

The children had further realized the special value of Danxiashan World Heritage site and felt the hard work of their parents through audios, tutors' explanations and field trips, etc. They have established good relations with each other through

mutual help and communication.

"The summer camp is really good. It turns out that there are so many stories about Danxiashan. The plants and animals here are very interesting and the starry sky is also very beautiful. We are proud that our parents are playing a role of guardians of the Geopark. We are proud to be the little guardians of Danxiashan," said the children on the closing ceremony. The parents who were invited to the closing ceremony were happy to see the progress their children have made.

"They have made new friends, learned to take care of each other, realized Danxiashan and enhanced their expression skills. It seems that they have grown up after the training camp." the parents said.

This is the second time that Danxiashan has held a science popularization camp for the children of the local employees. Participants were expanded to the children of the employees working in the local enterprises of Danxiashan.

Li Guiqing & Xiao Wei
Danxiashan UGGp, China



Creative Ways to Celebrate International Days in COVID Pandemic Situation

Dak Nong UNESCO Global Geopark, Viet Nam

In the pandemic situation, as territories of resilience, many geoparks have to create new methods to interact with local people and involve them into the geoparks' activities. As for Dak Nong UGGp, the geopark has managed to adapt and find initiatives for effective communication with local community.

How Dak Nong Geopark celebrated the International Day of the World's Indigenous Peoples 2021

In order to celebrate the International Day of the World's Indigenous Peoples 2021, after many online and offline meetings with locals, Dak Nong Geopark has compiled and published a book named *Tale of Nam Blang*, which presents a number of

interesting legends related to the geopark's heritage sites.

As each site has its own historical and cultural origin, this publication purposely works as means of transferring the diverse indigenous knowledge and belief as well as enhancing their sense of belonging. Thus, it will not be only a useful document for reference but also a small meaningful gift to get visitors closer to Dak Nong UNESCO Global Geopark.



Ways to integrate community's participation in the World Clean-up Day 2021

On other hands, in this year's spreading of covid-19 pandemic situation, Dak Nong Geopark has implemented

a new way of celebrating the World Clean-up Day. On its fanpage, the Geopark has organized a mini game

“Environmental messages through photos” to involve the followers to introduce their own environmental-friendly behaviors. It could be photos of 3-R products, of waste sorting, etc. which illustrates the participants' green lifestyle. This contest has attracted more than 30 photos from its fanpage followers.

In addition, the geopark has also encouraged its community from 6 districts within the territory to clean up their surrounding in accordance with local pandemic restrictions. Though only one district could satisfy the health conditions to gather for the cleanup, other district authorities have also implemented the activity of educating local on waste sorting on social media.

Especially, these district authorities have issued plans to hold a campaign of collecting household hazard waste at proper time till the end of this year, depending on the pandemic situation and restrictions.



➤ Youth in Dak Song district of Dak Nong UGGp was doing the cleanup



➤ “Household hazard waste sorting” and “Green lifestyle” propaganda posters on social media. This method of propaganda also benefits the locals and environment by reducing printing.



Shilin UGGp Conducted Tree Planting Activities

Shilin UNESCO Global Geopark, China

Shilin UGGp conducted tree planting activities aimed at raising public awareness in ecological conservation. The Geopark and other institutions, including the strategic partners of the Geopark, such as Electric Sightseeing Vehicle Company of Shilin, Heisongyan Hotel, are also involved in the activities.

Shilin UGGp is located in Kunming, the capital city of Yunnan Province, southwest China. Kunming is reputed as “Spring City”, since it is not very cold in winter and not very hot in summer and the climate is pleasant in all seasons, just like spring. Yet in the last decade the city dwellers felt the baking heat in summer and bitterly cold weather in winter. People are more and more getting realized the influence of climate change and the importance of boosting ecological conservation.

As we all know, forests are the lungs of our planet, drawing in

carbon dioxide and breathing out oxygen. Trees play an essential role in mitigating the impact of climate change. So planting trees is one of the most important things we can do to contribute to the health of the planet. That's why Shilin UGGp has always prioritized environmental protection and promoted the development of green and low-carbon cycles.

On the cloudy afternoon of July 22nd, dozens of the Geopark staff and employees from other institutions put their desk work at hands aside for half a day, took shovels and saplings suited to the region, such as Chinese pine and spruce, trekked out to green up the Geopark and hometowns. Nearly 500 tree seedlings were planted in a barren land of a depression within the Geopark. The activities cover tree planting and also follow-up care to ensue the trees can survive in a long term. Several staff

from Resources Management Division of Shilin Global Geopark Administrative Bureau are required to keep the soil moist by watering at least once a week, barring rain, and more frequently during hot, windy weather.

Shilin UGGp at all times gives a prominent position to environmental protection and conducts regular green program, such as tree planting, to enhance the ecological environment. Via tree planting activities, awareness was cultivated on loving and saving nature, treasuring lives, and learning about green development. These activities are essential to contribute to Sustainable Development Goals (SDGs) in facing the severe consequences of global warming. And let's protect the environment as we protect our eyes and treat it seriously as we treat our life.

Bao Jihong
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Non nuoc Cao Bang UGGp Celebrated the World Clean-up Day

Non nuoc Cao Bang UNESCO Global Geopark, Viet Nam

On the celebration of the World Clean-up Day 2021, on September 18th the Management board of Non nuoc Cao Bang UGGp cooperated with Department of Education and

Training, Youth Union of Cao Bang province to carry out clean-up activities, planting trees at schools and geosites. The objective of this program is to ensure the clean environment

surrounding schools and geosites and improve the awareness on protecting the environment among students, the youth and local communities in the geopark territory.



◆ The involvement of school students and youth union members in Non nuoc Cao Bang UGGp territory in the World Cleanup Day

To celebrate the World clean-up day 2021, Non nuoc Cao Bang UGGp cooperated with the Department of Education and training to guide and instruct Geopark ambassador clubs develop their work plan in which each group in the geopark is assigned with clear tasks, especially the DOINGs and communication. Upon on the implementation, Geopark ambassador club members cooperated with students in school to clean their school, design recycle bins, clean the geo-sites (schools located near the geosites). Then Geopark ambassador club members develop communication on Facebook or YouTube to draw attention of the public.

In addition, Non nuoc Cao Bang UGGp cooperated with Youth Union of Cao Bang province to carry out cleaning up activities in and surrounding their residential areas. These Youth union members also cooperated with schools students to carry out their cleaning up day. The idea of this mobilized approach is to capture attention and interests of young people in protection their living environment, and raising their awareness on issued caused by pollutants, and urge them to join hands with related authorities and Management board of Non nuoc Cao Bang UGGp in developing a resilient territory.



◆ Students of Po Tau High School planting flowers around the school



◆ Students of Nguyen Binh High School and youth members cleaning the street near the school



◆ Students of Ha Lang Secondary Boarding School cleaning up the surrounding of Sung Phuc Pagoda geosite

Celebrates the International Day for the Disaster Risk Reduction

Funiushan UNESCO Global Geopark, China

On October 13, China Funiushan UNESCO Global Geopark Management Committee organized science popularization activities to celebrate the International Day for the Disaster Risk Reduction (IDRR) in 2021 in Laojun Mountain, Luanchuan, Henan Province. The theme for this year's event is "all about International cooperation for developing countries to reduce

their disaster risk and disaster losses". Funiushan UNESCO Global Geopark worked together with the local people and the local authorities, and launched a series of science popularization publicity and educational activities through lectures, videos, exhibition boards, banners, information materials, information desk, and etc. More than 300 people participated

in the activities. This is a good opportunity to teach the public at large the knowledge and basic skills on prevention and response of disaster accidents, fully mobilize the enthusiasm of the public to participate in disaster prevention and reduction, strengthen the public's awareness of disaster prevention and relief, enhance the public's awareness of guarding nature and protecting

environment, reduce the risks of various disasters in Funiushan area, and finally enhance the public's comprehensive competence of resisting natural disasters, and make disasters be far away from Funiushan.

In recent years, Funiushan UNESCO Global Geopark Management Committee has fully realized the importance of carrying out natural disaster prevention and reduction work, and has investigated the past geological disasters in Funiushan area and the geological disaster relics or hidden danger points within the geopark at present. The committee conducted safety investigation and took necessary disaster prevention and reduction measures for sections with potential safety

hazards on scenic spots, such as Laojun Mountain, Laojieling, Baotianman and Baiyun Mountain. The committee compiled a popular science publicity atlas Keeping Disasters Away from Funiushan, in view of natural disasters and their prevention, such as collapse, landslide, debris flow, forest fire, flood disaster. The committee also organized theme science popularization activities on International Day for Disaster Reduction and National Day for Disaster Prevention and Reduction to popularize the knowledge of disaster prevention and reduction among the public every year. According to statistics, 14 exhibition boards were placed in this theme science popularization activity, and more

than 800 publicity materials of various disaster prevention and reduction knowledge were distributed to the public. These theme activities informed the public the general knowledge of disaster prevention, reduction and relief, and promoted people's awareness of disaster prevention and self-protection skills.

Funiushan Global Geopark Management Committee will make unremitting efforts to enhance disaster risk management ability, implement systemic disaster risk reduction strategies, and make new contributions to the sustainable development of Funiushan Global Geopark.

Funiushan UGGp Management Committee



Participatory Planning for the Activity Plan of 2022 of Geopark Partners

Non nuoc Cao Bang UNESCO Global Geopark, Viet Nam

On December 30th, 2021, the Management Board of Non nuoc Cao Bang Geopark held a workshop with geopark partners to review the activities of Non nuoc Cao Bang geopark's partner network in 2021, discuss, and provide inputs for Activity plan of 2022.

There were representative of the Department of Culture, Sports and Tourism, the Management board of Non nuoc Cao Bang geopark, representatives of Cao Bang Tourism Association,

Division of Culture and Information of districts in the geopark territory, restaurants, hotels, tourism service providers, agricultural cooperatives, craft villages in the partner network of Non nuoc Cao Bang Geopark.

At the workshop, the representatives of Non nuoc Cao Bang Geopark Management Board informed the participants on the progress report on the development of Non nuoc Cao Bang UGGp, particularly activities of geopark's partner network in

2021. Regarding some achievements of geopark partner activities, in 2021, the Management Board of Non nuoc Cao Bang Geopark in collaboration with the geopark partners continued the promotion and development of geo-products such as Jiaogulan tea (Gynostemma pentaphyllum), Kolia tea, Nguyen Binh glass noodle, Luong Noi brocade, Dao Tien brocade, etc; signed the commitment of Non nuoc Cao Bang Geopark's partnership

establishment between Non nuoc Cao Bang Geopark Management Board and the geopark partners; organized education and awareness raising activities about the geopark and networking activities among the geopark's partners such as training workshop for the geopark's partner network and aspiring partners in March 2021, training course on drowning rescue for official and aspiring geopark partners in October 2021, etc; cooperated with the People's Committee of Nguyen Binh district to conduct baseline surveys and propose activities on sustainable tourism development on the basis of UNESCO Global Geopark in Hoai Khao village, Quang Thanh commune, Nguyen Binh district; organized training course for the locals in Dia Tren traditional paper factory village, Phuc Sen commune, guiding the diversification of the paper products serving tourism purposes.

In addition, participants also discussed about the Activity plan for 2022, in which geopark partners commented and provided inputs for geopark network in 2022 focusing on the following issues: environmental protection, environmentally friendly agriculture, local product

branding, tourism activities for the preservation and promotion of traditional cultural values and geo-sites, improving the quality of tourism services, support activities and cooperation among geopark partners, promoting and developing geo-products, proposing the participatory-management of tourist destination, which clearly defines

the responsibilities of relevant authorities and agencies, etc. This is one of the activities that has been introduced in order to enhance the participation of geopark partners and local communities for engaging development of Non nuoc Cao Bang UGGp.



Mr. Truong The Vinh, Deputy Director of the Department of Culture, Sports and Tourism cum Director of Non nuoc Cao Bang geopark Management Board delivered the opening speech



Mr. Vi Tran Thuy, Deputy Director of Non nuoc Cao Bang geopark Management Board presented about the overview of the sustainable tourism development in the geopark territory



Ms. Hoang Thi Huyen, member of Non nuoc Cao Bang Management Board presented about some outstanding activities of Non nuoc Cao Bang geopark in 2021



Ms. Dam Thi Chien, Head of Culture and Information Division of Quan Hoa districts commented on the Activity plan 2022 of the geopark's partner network



Ms. Nguyen Thi Lan, Chairperson of Cao Bang Tourism Association listed some problems related to Cao Bang tourism and suggested solutions



Ms. Ha Thi Hoa, Kolia Co., Ltd. raised the current situation of waste treatment and environmental protection in Phja Den ecotourism destination



Ms. Nong Thi Thuoc, artisan of Luong Noi brocade village, suggested rearranging the direction panel leading to Luong Noi village



The Symposium for the 10th Anniversary of Tianzhushan UNESCO Global Geopark Held



Tianzhushan UNESCO Global Geopark, China

On September 17, 2021, the symposium for the 10th anniversary of Tianzhushan UNESCO Global Geopark was held. Mr. Tu Gaosheng, member of Qianshan Municipal Standing Committee and deputy director of Tianzhushan Geopark Administrative Committee attended the symposium and delivered a speech. Mr. Zhang Fang, member of the Party Committee of Tianzhushan Geopark chaired the meeting. Professor Liu Yican, University of Science and Technology of China, Mr. Zhao Kai, associate professor

of Anqing Normal University and other experts and scholars were invited to participate in the symposium. Representatives from Tianzhushan Administrative Committee and Tianzhushan Tourism Company, Forestry Bureau, Culture, Tourism and Sports Bureau, Natural Resources and Planning Bureau and other related departments, Huangpu Town, Doumu Town, Tianzhushan Town and other relevant towns, and geo-site patrollers and geopark partners were invited to attend the symposium.

At the symposium, Prof. Liu Yican gave a special lecture on international significance of geo-heritages within the geopark; Mr. Gao Jianqiang, director of Tianzhushan Geopark Administrative Center, reviewed the development of the geopark in the past 10 years; Prof. Zheng Yangui shared the application experience of Tianzhushan UGGp in 2011; Prof. Wu Weiping summarized scientific research and popular science works of Tianzhushan Geopark; Representatives of Doumu Town and Huangpu Village

shared their regional social and economic development driven by Tianzhushan UGGp; Other participants put forward suggestions on the geopark management and development. An awarding ceremony for popular science demonstration schools also held during the symposium.

This year marks the 10th anniversary of Tianzhushan UNESCO Global Geopark. In the past decade, Tianzhushan UGGp has implemented the ecological civilization thought of Secretary General Xi Jinping “Lucid Waters and Lush Mountains are Invaluable Assets”, actively practiced the new development concept of “Innovation, Coordination, Green, Openness and Sharing”, with “protecting the nature, serving the people and sustainable development” as the goal. Tianzhushan UGGp has made solid progress including improved infrastructure facilities, protected geo-heritages, scientific research and science popularization activities, networking, geo-tourism, as well as economy in the local community.

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◆ Mr. Liu Yican, doctoral supervisor of USTC, is giving a special lecture on Tianzhushan geo-heritages with international significance



◆ Mr. Gao Jianqiang, director of Tianzhushan Geopark Administrative Center, is reviewing the development of the park in the past decade



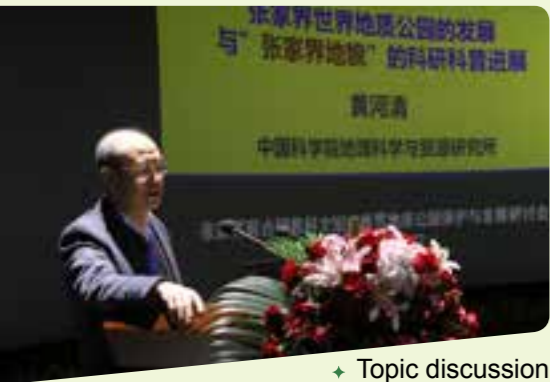
◆ Professor Wu Weiping is summarizing scientific research and popular science work of Tianzhushan Geopark



◆ The awarding ceremony for popular science demonstration schools

Conference on Geopark Protection and Development

Zhangjiajie UNESCO Global Geopark, China



➤ Topic discussion

From 21th to 22th of December, 2021, Zhangjiajie UNESCO Global Geopark Protection and Development Conference was held successfully at Wulingyuan District of Zhangjiajie City, where Zhangjiajie UGGp is located. This conference aimed at sharing experiences and identifying problem-solving measures on scientific research and popularization and practices in geopark management and community's sustainable development with sister geoparks and experts and scholars. The conference was hosted by the People's Government of Wulingyuan District of Zhangjiajie City and Administrative

Committee of Zhangjiajie UNESCO Global Geopark, and co-organized by Research Center for Zhangjiajie Geomorphology, Geopark Management Office of Zhangjiajie City, and Zhangjiajie UNESCO Global Geopark Museum.

According to the safety rules and regulation on large gathering due to Covid-19, the conference was only allowed to have less than 100 participants. In total, more than 80 participants attended the conference, including representatives from seven sister geoparks of Wangwushan-Daimeishan, Lushan, Dunhuang, Ningde, Longhushan, Funiushan and Xiangxi UGGp, and experts, scholars and administrative officers from Committee of World Heritage Experts in the National Forestry and Grassland Administration of China, Institute of Geographic Sciences and Natural Resources Research of Chinese Academy of Sciences,

Central South University, Central South University of Forestry and Technology, Geological Museum of Hunan Province, Natural Reserve Center in Forestry Department of Hunan Province, Forestry Division of Zhangjiajie City, University of Groningen of the Netherlands and other organizations. Some representatives of sister geoparks could not attend the conference at the final stage due to the pandemic.

In the thematic session, representatives from Zhangjiajie, Wangwushan-Daimeishan, Lushan, and Xiangxi UGGp presented very detailed introductions on their activities, achievements, problems encountered and problem-solving measures on scientific research and popularization, geopark management practices, geoheritage and eco-environment protection, and promotion of sustainable development in geopark communities. In the



following topic discussion session, experts, scholars, and representatives of geopark management teams and communities shared their knowledge, experiences and views on geopark management and development, geo-heritage and eco-environment protection, science popularization promotion, tourism development for boosting rural revitalization, and tourism industry development in the situation of the normalized epidemic prevention and control. In addition, a special session was organized to share research results and management practices on cave protection and the characteristics of Sinoceras fossils distributed in Zhangjiajie UGGp.

Through detailed discussions, all sister geoparks agreed to further strength the partnership by creating co-operative research

projects on geoscience research, heritage conservation, tourism and education. Importantly, a "Declaration of Zhangjiajie UGGp Protection and Development Conference" was issued to the public, calling all geoparks play a leading role in reducing the use of single-use, non-degradable plastics and parcel packaging, encouraging low-carbon tourism and living styles, carrying out scientific research, onsite learning and sports tourism, and propelling the coupling between culture

and nature so as to achieve sustainable development. During the conference, all participants visited the newly upgraded museum of Zhangjiajie UNESCO Global Geopark and evaluated the interpretation of the contents. Field investigations in Yuanjiajie, Tianzi Mountain and Huanglong (Yellow Dragon) Cave were also conducted, and constructive suggestions and comments for the management of Zhangjiajie UGGp offered.



➤ Thematic report

Zhoukoudian Peking Man 1st Site (Ape Man Cave) Protection Building Project Won International Award

Fangshan UNESCO Global Geopark, China

Zhoukoudian Peking Man 1st site (Ape Man Cave) protection building project won "UNESCO Award for new design in heritage contexts"-protective shelter at the locality 1 archaeological site of Zhoukoudian Peking Man Cave of Fangshan UGGp. On

September 24th, 2021, at the opening ceremony of the 1st Beijing public archaeology season, Himalchuli Gurung, cultural Commissioner of UNESCO Beijing office, presented this award for Fangshan UNESCO Global Geopark.

The UNESCO Asia Pacific Cultural Heritage Protection Award was established in 2000 to recognize the achievements of individuals and public and private sectors in protecting or restoring buildings, sites and real estate with heritage value in the region, so as



to encourage individual participation and public-private cooperation to protect the cultural heritage of the region and benefit present or even the future generations.

Mr. Jing Feng, director of Asia and Pacific Department of UNESCO World Heritage Center, and Ms. Hanh and Duong bich, director of Culture Department of Bangkok Office (Asia Pacific headquarters), sent congratulations to Zhoukoudian Peking Man Site of Fangshan UGGp.

Zhoukoudian Peking Man 1st site (Ape Man Cave) protection building project is the most important fossil site, from which nearly 200 human fossils, more than 100000 stone tools, several layers of ashes and more than 100 kinds of animal fossils representing about 40 "Beijingers" have been found. It is the most symbolic accumulation of scientific value of the site, preserving the most complete stratigraphic sequence and rich scientific information of this place.



CALL for the Next INTERNATIONAL GEOPARK CAMP (IGC) for YOUTH



Muskauer Faltenbogen / Łuk Mużakowa UGGp, Germany & Poland

After very long-term warm memories and numerous new experiences from a successful mix of different topics, sciences and social events for 34 young people from Greece, Hungary,

Romania, Italy, Poland and Germany, it is now time for a new International Geopark Camp (IGC) for Youth in SUMMER 2022! Due to the coronavirus

pandemic, the Geopark Camp, postponed from 2020, returns with new ideas, but the old title: Geology meets geological witnesses of Climate Change. Three groups are already working on the project – and we look forward to YOUR PARTICIPATION! Do you know a group of young people who are interested? Willing to investigate a scientific topic from your Geopark and to prepare it in a common book with the above title? Who are up for an 8-day camp in Germany and Poland? Then let us begin!

The costs of the IGC will be nearly full covered by the Muskauer Faltenbogen / Łuk Mużakowa UGGp. Ask for more information at short notice: e.brauer@muskauer-faltenbogen.de or n.sauer@muskauer-faltenbogen.de.



IGC for Youth 2018



SUBMISSION GUIDELINE

The GGN Newsletter will be published regularly on a quarterly basis. Submissions of January, February and March will be published as ISSUE 1 of the current year by the end of April, and so on. Submissions of October, November and December will be published as ISSUE 4 by the end of January of the following year.

The contents of the articles could involve the following themes: 1_GGN Networking and Common Activities, 2_Geo-Tourism, 3_Activities and Events, 4_Geo-Education and Science Popularization, 5_Promotion and Communication, 6_Human and Nature, 7_Culture and Custom, 8_Conferences, Courses and Workshops (which have happened), 9_Announcements (Future Conferences, Courses and Workshops), etc.

Article template and requirements:

THEME: you could choose one of the 9 themes above or you could define a theme.

TITLE: no more than 20 words.

GEOPARK NAME: If the article is from a geopark.

MAIN BODY: 1_Times New Roman, 11 pt. 2_For the length of the texts, it is better between 300-500 words of each text. 3_The file needs to be saved under the Issue_THEME_geopark/affiliation. For example, 2018 ISSUE 1_Geo-Tourism_Yanqing UGGp, China.

INFORMATION OF THE AUTHOR: author's name, affiliation/organization, COUNTRY, email.

THE PHOTOS: no more than 5 photos and related captions (captions could be added at the end of the article) and the logo of the geopark (if the article is from a geopark).

We will notify you within two weeks prior to publication whether we accept or reject the article. And we will make appropriate modifications without changing the original meaning of the article.

You can download the past issues of GGN Newsletter on the following website:

<http://www.globalgeopark.org/News/Newsletter/index.htm>

Submission email: ggnnewsletter@163.com.

Welcome your contributions! If you have any questions, please do not hesitate to contact us.

Editorial Board