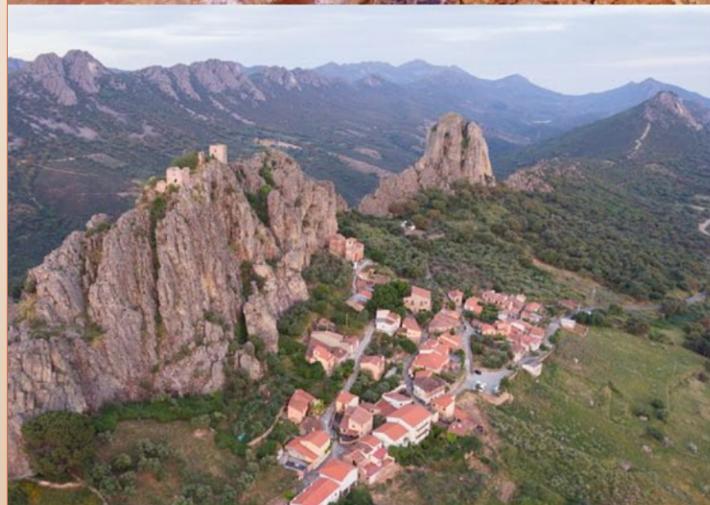


INTERNATIONAL MEETING ON THE EDIACARAN SYSTEM AND THE EDIACARAN-CAMBRIAN TRANSITION



Organized under the support of
The International Subcommission on Ediacaran Stratigraphy
The International Subcommission on Cambrian Stratigraphy

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Guadalupe,
Extremadura, Spain,
October 17-24th, 2019

VILLUERCAS IBORES JARA
UNESCO GLOBAL GEOPARK



Organización
de las Naciones Unidas
para la Educación,
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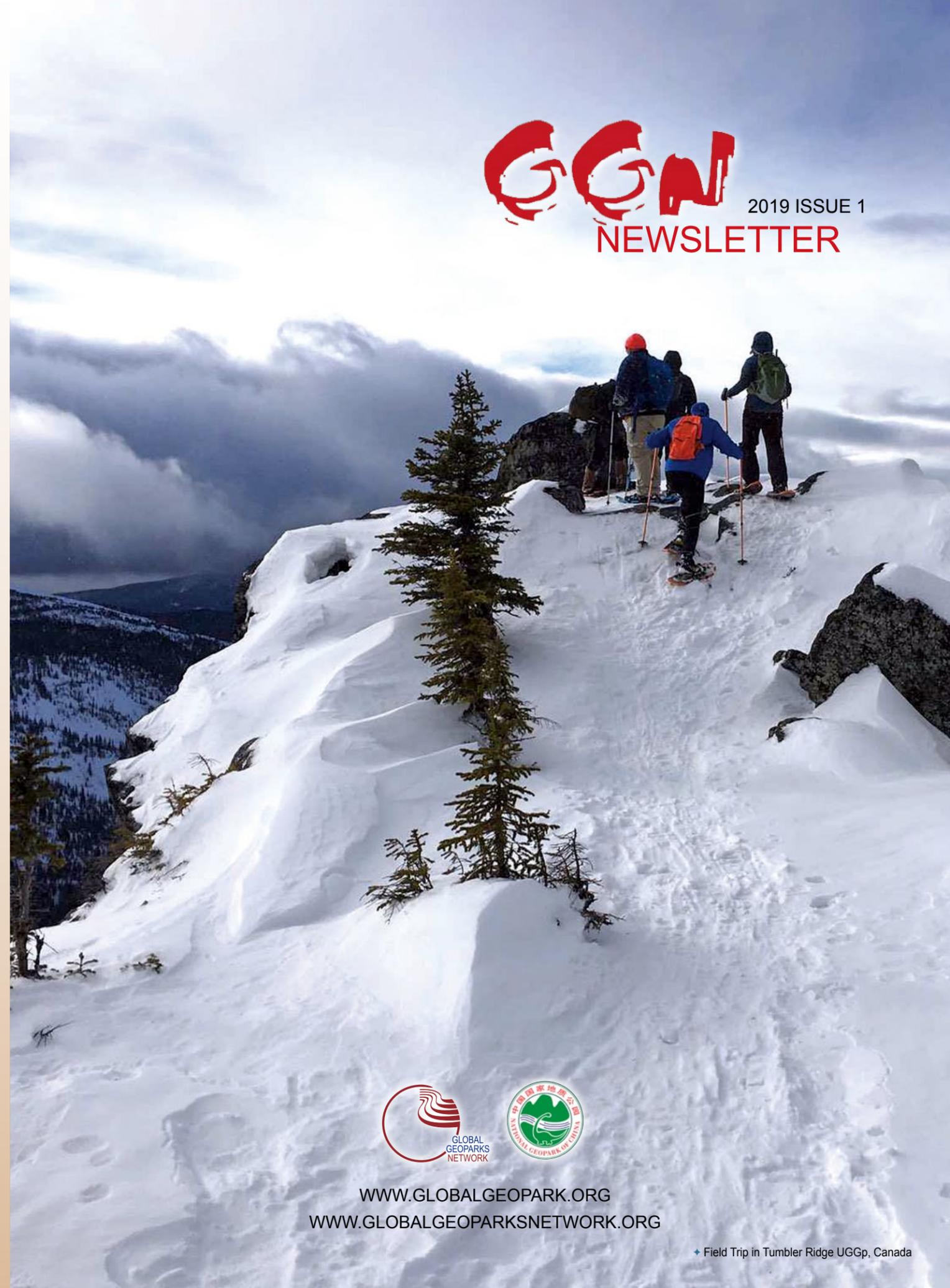
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2019 ISSUE 1

NEWSLETTER



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✦ Field Trip in Tumbler Ridge UGGp, Canada



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Don't Leave Your Imprint Behind in Lanzarote and Chinijo Islands UGGp, Spain

Lanzarote and Chinijo Islands UNESCO Global Geopark, Spain

From Lanzarote and Chinijo Islands UNESCO Global Geopark, we have been witnessing an increasing trend in the past few years that modifies the ecosystem and landscape and that has resulted in a significant reason for social concern on our Islands. This has led to a change

in environmental law in places such as Hawaii, where these actions can result in a 6-month jail sentence and expensive fines for those "artists" who choose to jump on the bandwagon. We are referring to the *tonguitas*, *fites*, *milladoiros* and balanced stones (piled up and used to make

different shapes with). What in history was used ordinarily as a resource to mark the boundaries of land (*mojones*) is now far from crop lands, and mountaineering as a way of marking routes (called cairns in Celtic culture). Its use nowadays is as an ephemeral form of artistic expression. These well-known stone MOUNDS, were also employed for ceremonial purposes in Buddhist Andean religions. However, nowadays they're just behind trying to get more Instagram followers, a bucolic image next to a sunset somewhere idyllic, a sample of those who feel the need to leave their mark wherever they go.

This new form of environmental terrorism includes other personal displays already previously seen like scattering geological materials or painting directly on

rocks. Some popular quotes include: "Marta was here" "Carlos loves María" or "I love you forever", (it's a mystery to us to what extent can the word/concept of LOVE have any actual meaning to someone who disrespects the ecosystem in such a way). Moving sedimentary rocks to places where they don't belong is not a harmless action, besides, it also has a significant visual and environmental impact. The damage caused by painting porous volcanic rocks is irreversible. Anthropocentric behavior brings nothing to the environment, to the contrary, it highly damages the landscape.

The Geopark, along other social and educational groups, is organizing days allocated to recover the areas that have been affected by this form of aggression, aiming to reduce the damage caused as much as possible, and using the media to raise awareness and avoid for this trend to continue on and get out of control.

If we are looking for balance and meditation in nature, it's better to feel the energy of a place that is perfect such as it is. Don't leave your imprint behind.

Mónica Méndez Prego
Yaritza Luzardo Medina
Clara Bonilla Cabrera

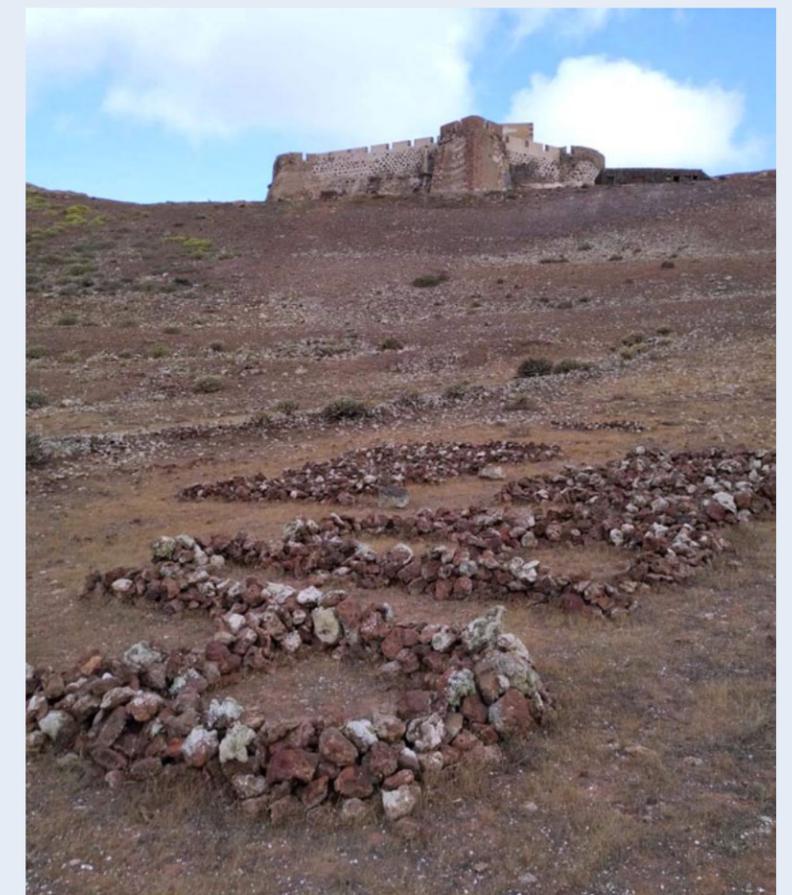
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✦ The removal of stones from their original position favors the increase of erosion processes



✦ In many cases the authors who make these figures are not aware of the damage they cause to our nature



✦ The fashion of making drawings, names and figures with stones in natural environments is also affecting our cultural heritage



Shennongjia UGGp Builds a Bio-Corridor

Shennongjia UNESCO Global Geopark, China

In January 2019, Shennongjia UGGp completed the construction of the first phase of its Bio-corridor Project by installing 27 signboards and 18 interpretation panels.

In order to improve the species exchange between habitats and the functional connection between eco-systems in Shennongjia and even the greater Shennongjia area in west Hubei and east Chongqing, Shennongjia UGGp started in 2018 the construction of the Bio-corridor Project. The first phase of the Project contains the construction of 25



Installing a camera near a wildlife crossing

wildlife crossings, including 1 comprehensive wildlife crossing bridge, 2 tree bridges for the Golden Snub-nosed Monkey, 22 wildlife crossing culverts and gentle slopes along the roads.

Known as a "Shelter of Animals and Plants" and "Kingdom of Wildlife", Shennongjia UGGp is the home of many rare, endangered and endemic species, including Chinese national protected species such as Golden Snub-nosed Monkey, goral, tufted deer, black bear, yellow-throated marten, leopard cat, forest musk deer and etc. However, due to

the disturbance by human activities in history and the obstruction by a national highway, the eco-systems of some species are relatively isolated, which threatens the regional bio-diversity conservation and ecological security.

The design of the wildlife crossings of Shennongjia UGGp is in accordance with the life habits and migration patterns of the wildlife along the roads, and can greatly reduce the roadkill accidents, thus guaranteeing the normal living, migration and reproduction of the wildlife and lowering the threat posed to rare and endangered species by human activities.

These wildlife crossings integrate forest elements such as fallen tree, vine, moss and lichen, etc., and can well blend into the surrounding environment. Camera traps are installed near the crossings to monitor the crossing wildlife and provide data for research and conservation. Currently the second and third phases of the Project is in the planning process. Upon the completion of the Project, a wildlife crossing network will be established for the wildlife exchange between 6 neighboring protected areas in Hubei and Chongqing.

Chen Jinxin
Shennongjia UNESCO Global



Interpretation panel for wildlife crossing



Warning signboard for wildlife crossing



Tree bridge for Golden Snub-nosed Monkey

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Idrija Selected



A Collective Trademark Established in Idrija Geopark

Idrija UNESCO Global Geopark, Slovenia



♦ Idrija Selected honey

For over a year a dedicated team of Idrija Heritage Centre was working on the development of a new collective trademark to enhance the Idrija Geopark geotourism. After months of efforts and cooperation of various stakeholders the Idrija Selected brand was born. In January 2019, the first Idrija Selected certificates were awarded to an array of products originating from Idrija area. 17 local providers received the certificate for over 30 products which reflect excellence and the finest quality. The awarding ceremony was accompanied by an exhibition and tasting of the certified products.

The collective trademark Idrija Selected presents products and services that meet high standards of quality, include locally produced raw materials

and tell a story of tradition, culture and the lifestyle of the people living in the Idrija UNESCO Global Geopark. All of the products are an exquisite addition to the tourist offer in the geopark and an opportunity for local artists, farmers, bee-keepers, restaurants and other entrepreneurs to present and sell their craft.

The idea of establishing a collective trademark was developed and carried through an Interreg Danube Project – Danube Geotour, with Idrija Heritage Centre as a leading partner. The collective trademark introduces various products of handicraft, foods, dishes, drinks and tourist programs, which are already or will soon be available at local market places, at vendors and in Idrija Tourist Organization online store. The



♦ Handicraft Idrija Selected in the making



♦ Commission evaluating products

main purpose for establishing a collective trademark was to build partnership with local providers and strengthen geotourism while providing an opportunity to expose or develop local environmentally and culturally responsible products.

With Idrija Selected trademark, a tourist visiting the Idrija Geopark is acquainted with traditional and new food flavors, selected experiences and unique arts and crafts that bring him/her closer to the local environment. The trademark follows the main vision of geotourism by engaging local people to provide sustainable products and services.

In 2019, the Idrija Heritage Centre is continuing the work on the collective trademark and carrying on with the activities to solidify and expand the Idrija

Selected brand. The tender for obtaining the Idrija Selected certificate will be re-launched and existing or new providers

will have the opportunity to certify more excellent tastes, experiences and crafts of Idrija and its surroundings.

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♦ Idrija Selected handicraft



Daily life of local people



Traditional house in DongVan UGGp

Life Melody in a Rocky Kingdom

Dong Van Karst Plateau UNESCO Global Geopark, Viet Nam

Dong Van Karst Plateau UNESCO Global Geopark located in the northernmost of Vietnam with an area of

about 2,345km², Dong Van Karst Plateau UNESCO Global Geopark became the first Global Geopark of Vietnam in 2010.

As over 60 % is limestone and at more than 1,000 meters above sea level, the Dong Van Plateau is famous for its deep gorges, rocky forest, jagged rocky desert, cliffs hidden in the clouds along with four experience routes, which will be a rewarding opportunity for visitors to discover the geopark and the daily life of local people.

"Life melody in a rocky kingdom" is the second route (out of 4 routes) providing rewarding travel experiences for visitors, starting from Yen



◆ A small village in Dong Van UGGp

Minh district to Dong Van district. On this route, visitors will have the opportunity to see the geosites formed through a process spanning a few hundred million years such as the Van Chai rock garden, Van Chai seal rocks, Tham Ma slope, as well as cultural heritages, architecture and history representing the culture of local people like the H'Mong ethnic culture village, H'mong traditional house, Vuong castle, Dong Van's old quarter, Don Cao fortress and other intangible heritage including the Thai Phin Tung sacred tree.

On the Dong Van Karst Plateau, which is a land mostly covered by limestone and located in the middle of the remote area, the life of local people here has never been easy with extremely harsh living

conditions. However, it is not a cold and barren landscape at all. People in this rocky region have varied lives with specific ethnic cultures reflected in the house architecture styles, ethnic costumes and festivals.

Besides, spectacular scenery and valuable tourist attractions providing historical and educational value will make visitors feel ecstatic as if they are enjoying a marvelous melody with beautiful chords.

Do The Vinh

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◆ Rape flower in DongVan UGGp

Geological Disaster Emergency Drill was Carried out in Lushan UNESCO Global Geopark, China

Lushan UNESCO Global Geopark, China

On 26th March, a geo-disaster emergency drill was held at Green Dragon Pool Area of Lushan UNESCO Global Geopark, China. Recently, a water channel of a local hydropower station was collapsed because of continual rainfall. The water in the channel poured to the mountain body directly and caused a consequent mudslide. After this disaster, Lushan UNESCO Global Geopark Administrative Committee decided to hold an on-site geological disaster

emergency drill so as to enhance consciousness of disaster prevention, optimize the measures of preventing disasters, and eventually enforce the capacity building of local departments and residents in terms of disasters identification and prediction as well as the post-disaster emergency management.

The whole drill was divided into six steps, including checking potential disaster, identifying the dangerous situation, confirming monitor measures, early warning, evacuating and relocating the residents at the disaster area.

Emergency Rescue Team was made up of four groups- warning group, protecting group, medical group and rescue group. This drill followed the emergency drill plan which formulated in advance to restore the original geological disaster site and simulated the process of checking and identifying disaster, confirming monitor measures, early warning, evacuating and relocating the residents. The local residents involved it with



➤ Assigning the work individually

enthusiasm and the whole drill achieved successfully.

This emergency drill enforced the local residents' consciousness on disaster prevention and enlightened the local authorities to further optimize disaster prevention methods. As a key point in the construction of the disaster prevention network which involves local residents, a pragmatic emergency drill can inspire people to know more about disaster prevention and finally improve the local capability of preventing disasters.



➤ Checking and identifying



➤ Relocating



➤ Medical rescue



➤ Evaluating

First Official Meeting of the Transboundary UNESCO Global Geoparks



Muskauer Faltenbogen / Łuk Mużakowa UNESCO Global Geopark, Marble Arch Caves UNESCO Global Geopark

At the invitation of the German-Polish Muskauer Faltenbogen / Łuk Mużakowa UNESCO Global Geopark, four transboundary UNESCO Global Geoparks met for the first

time to get to know each other and to speak about a future cooperation. In parallel to the 43rd CC Meeting, the Hungarian-Slovakian Novohrad-Nógrád UGGp, the Austrian-Slovenian

Karawanken-Karavanke UGGp and the UK-Ireland Marble Arch Caves UGGp worked together with the Muskau Arch UGGp to collect major issues of mutual interest, and to prepare a first



◆ UGGMA transnational UGGps first meeting Swabian Alb

joint workshop in autumn 2019.

Worldwide there are only four UGGps out of the current 140 that can call themselves a transnational UGGp. Transnational UGGps have a huge amount of knowledge and experience in international cooperation not only in the usual areas of the UGGp operation, but also in the mediation and promotion of cooperation between the UGGp local authorities and communities, local partners, professional organizations and institutions, and tourism bodies. They must also face special challenges in their daily work; from the shared management structure building process through to common financing and staff, and bilateral concepts in agreement with

both of the relevant national organizations and authorities. All of these issues require special expertise and a thorough knowledge of the partner countries with their different legislation, social systems and cultural mentalities. However, just as important is the mutual trust, respect and a lot of good will from all parties concerned.

The first transnational UGGp was established in 2008 when the Marble Arch Caves UNESCO

Global Geopark expanded from Northern Ireland (UK) across the border into the Republic of Ireland. The second was in 2010 with the Novohrad-Nógrád UGGp spreading over parts of Hungary and Slovakia. Only one year later, the German-Polish Muskauer Faltenbogen / Łuk Mużakowa UGGp became a member of the Global Geopark Network, and in 2013 there followed the Austrian-Hungarian Karawanken-Karavanke UGGp.

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A series of Activities of the 50th World Earth Day were held in Leiqiong UNESCO Global Geopark

Leiqiong UNESCO Global Geopark, China

In order to commemorate the 50th World Earth Day and help to enhance public awareness of the idea that “lucid waters and lush mountains are invaluable assets” and to advocate harmonious co-existence between humans and nature”, Leiqiong UNESCO Global Geopark Management Committee held the publicity activities for the 50th World Earth Day both in Zhanjiang City in Guangdong Province and Haikou City in Hainan Province on April 19-22, 2019.

With the theme of “Cherish the Beautiful Earth, Protect the Natural Resources”, a series of activities were held, such as “Beautiful Zhanjiang” ecological civilization conservation photo show, children charity painting competition, calligraphy and painting competition, popular science courses on campus, natural education pop-science books donation to primary and middle schools, Q&A game on popular science knowledge on natural resources, etc. The idea

of “Cherish the Beautiful Earth, Protect the Natural Resources” has gained more awareness of citizens and tourists through these activities. Popular science knowledge was widely spread among students. The public was stimulated to get close to the nature, learn about the nature and protect the nature. About 2000 people participated in the Q&A game. This activity has enhanced public awareness of earth and environment protection



◆ School Course held during the 50th World Earth Day



◆ "Excellent Little Painter" Award Ceremony

and the threat of resource crisis, guided the public on how to utilize natural resources in an economic and intensive way and strengthened public consciousness on the precious natural resources including mountain, river, forest, field and grassland which we human beings depend on.

Leiqiong UNESCO Global Geopark
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◆ Audience at the "Beautiful Zhanjiang" ecological civilization conservation photo show



◆ Students and tourists took an active part in Q&A game on popular science knowledge on natural resources



◆ Winners of calligraphy and painting competition



◆ Award-winning works were shown in Wuyuanhe School



◆ Interesting geoscience course was held in Zhanjiang Huguang Center Primary School



◆ Staff of Leiqiong UGGP brought popular science books to a primary school



◆ Opening ceremony of the 50th World Earth Day

Break the Limit

An appeal addressed to all the UNESCO Global Geoparks to adopt this slogan

Madonie UNESCO Global Geopark, Italy

Tourism beyond the barriers, a project already successfully tested by the Sicilian Geopark for disability and disclosure of a culture based on the awareness of different forms of openness and accessibility in places and in common areas.

There have been many educational initiatives and activities, involved some villages of the Madonie Park, a Foundation that deals with problems concerning the disabled, and the Cesvop service center for volunteering, all together to break down the



◆ Break the limit @Ente Parco delle Madonie

architectural barriers. A group of students are represented by a model of a path designed without barriers. Moreover an innovative

technological tool has been used as a particular virtual mask that allowed everyone to travel in the territory with virtualism of images.

A cycling tour-cycle has been divided into stages to make known the limits in the territory for the disabled who should be guaranteed by law.



◆ Ciclostaffetta Break the limit @ Ente Parco delle Madonie

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Varieties of Activities for the Public Held by the Jingpohu Global Geopark, China

Jingpohu Global Geopark, China



◆ Opening Ceremony of 2019 China Jingpohu International Ice Race

On January 27th, 2019 China Jingpohu International Ice Race was successfully held in the Jingpohu Global Geopark for the first time. The event was hosted by the Mudanjiang Municipal Government, Sina.com, Heilongjiang Provincial Sports Bureau, Jingpohu Management Committee, Jingpohu Tourism Group and Longji Sports Culture Development Co., Ltd. The race track is all within miles of the frozen lake - Jingpohu. The track is set in a ring shape, equal to half of the marathon distance (21.0975km) with 5km-long ice and snow happy run. More than 1100 ice-running

enthusiasts at home and abroad have participated in the race. After intense competition, 23-year-old Qianwuyun Batu from Inner Mongolia won the championship. During the competition, a number of events and performances including the Ice Dragon Boat Challenge and Ice Car Drifting Race have been held, and the contestants have been provided with wild lake fish soup, fish dumplings, boiled corns, rice cakes, candied haws with local specialties. Every player and visitor to Jingpohu will be sure to enjoy the ice and snow culture. As the first international ice race on the lake, this race aims to make every effort to establish the brand of "Jingpohu ice race" and promote the snow sports in winter in Heilongjiang Province.

Lan Feng

Jingpohu Global Geopark Management Committee,
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◆ 2019 China Jingpohu International Ice Race - athletes before running



◆ 2019 China Jingpohu International Ice Race - Xingkaihu Run Team

Event Programme in Cooperation with UNESCO WHS Messel Pit According to the International Days of the United Nations



Bergstrasse-Odenwald UNESCO Global Geopark, Germany

In the frame of their longlasting cooperation, the Bergstrasse-Odenwald UNESCO Global Geopark and the UNESCO WHS Messel Pit have implemented a new annual event programme, which takes place in the Visitor Centre of Messel Pit and the site itself: According to the International Days of the United Nations a series of workshops and guided tours have been developed, which highlight the holistic approach of the Geopark, the basic messages or the UNESCO World Heritage Site and which are suitable for different target groups. These events include

a family adventure trip during the International Day of the Forests, four Geo-Workshops according to the International Day of mother Earth (Earth's history), the International Day of Biodiversity (When Messel was a part of the rain forest), the International Day of Soil (soils, rocks and fossils) and the International Day of Disaster Risk Reduction (volcanos). The event programme also includes public presentations like a journey through the Earth's history of the Geopark territory (International Day of Environment), a peace greetings activity day (International Day

for the Refugees) and four author's lectures (International Days of Tolerance, Children, and Volunteers). The intention of the event programme is to support the broad international message of the United Nations on the local level: Understanding between the nations, peacebuilding, cooperation, communication and protection of our Earth's geological, natural and cultural treasures.

Dr. Jutta Weber

Bergstrasse-Odenwald UNESCO Global Geopark, Germany
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◆ Author's lecture family event



◆ Geopark presentation: Earth history, geo-education and networking



◆ Geo-workshop with the Geopark Rangers



South Devon College Launches Brand New Partnership in the English Riviera UNESCO Global Geopark

English Riviera UNESCO Global Geopark, United Kingdom

The English Riviera UNESCO Global Geopark is honoured to announce the launch of a new partnership with South Devon College.

Following our conference 'The Rock Connects Us' in November 2018, South Devon College worked to develop a curriculum offer to highlight the importance of our UNESCO designation.

Nikolaos Zouros, Chair of the Global Geopark Network Association, sent a video to launch the new partnership which showed him talking of his high hopes of what this partnership would achieve. Not just in our local area but internationally too.

Nikolaos said "University

Centre South Devon and South Devon College are proactive partners of the English Riviera UNESCO Global Geopark in launching this programme.

I think this is a unique new initiative joining geological heritage with sustainable tourism and development. On behalf of the Global Geoparks Network, I would like to congratulate South Devon College for this new educational initiative and I will encourage colleagues all around the globe to send students to study in the English Riviera under the frame of the new course named Study at the English Riviera UNESCO Global Geopark."

Melanie Border, English Riviera UNESCO Global

Geopark Coordinator said "Back in November 2018 at our 'The Rock Connects Us' event which brought together over 100 tourism chiefs, economic regeneration experts, major business leaders and geoscience and education professionals, we discussed how we could all work together to support Torbay's social, economic, cultural and environmental ambitions.

We are absolutely thrilled that South Devon College approached us with the idea of developing a curriculum offer that not only benefits those studying or looking to study in the area, but raised the importance of our UNESCO status on a local level.



We are excited to work with the team at South Devon College to not only inspire the next generation, but to create a sustainable awareness programme for everyone living within the English Riviera Global Geopark."

Ben Roper, Higher Education Coordinator at South Devon College, discussed the key unique points on the FdSc Adventure Leadership and BSc (Hons) Coaching (Outdoor Leadership), awarded in partnership with the University of Plymouth. They are the only degree programmes in Europe to be delivered in a UNESCO Global Geopark in this field, as well as it being the only adventure degree programme

in the UK which offers the RPIOL accreditation. Also, with the employer based delivery model, this gives degree students valuable work based skills whilst on programme.

Lynn Squire, Head of Sport, Leisure & Hospitality Industries at South Devon College, says "The partnership between South Devon College, University Centre South Devon and the English Riviera UNESCO Global Geopark is such an exciting opportunity to

develop a sustainable model of raising awareness of the incredible local environment".

In addition, the higher education programmes offered by South Devon College will create resources for Torbay's local primary schools and community groups, creating a sustainable programme that promotes our UNESCO designation and increases awareness of our natural environment.

Melanie Border

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Enhance the Visibility of the Geopark and Create a Distinctive Brand of Geological Science Popularization

Wangwushan-Daimeishan UNESCO Global Geopark, China

In recent years, Wangwushan-Daimeishan Global Geopark has paid more attention to geological science, education and popularization, scientifically compiled the annual objectives and plan for the science popularization of the park, planned and carried out a series of activities, including “Geological Science Lecture Hall”, “Introducing geological science into the homes of common people” and “Zero-distance experience of the Geopark”. These activities have not only enhanced visibility of the park and effectively disseminated



Study Geological Knowledge since Childhood

knowledge of geological science, but also formed the distinctive brand of the Geopark in geological science popularization and expanded its reputation and influence.

“Geological Science Lecture Hall” is very much loved by both teachers and students. Since the beginning of the year, the Administration of Wangwushan-Daimeishan Global Geopark (“Administration”) has teamed up with the Huanghe Road Primary School, No.1 Jinuan Middle School and Jiyuan Vocational Technical College to include geological science into their characteristic courses and regularly hold the activity of “Geological Science Lecture Hall”. The forms adopted include special lectures on geological



Incorporating the content of geological science popularization in the course and holding a lecture of geological science popularization

science, distribution of popular science readings, competition of popular science knowledge, promotional videos of the Geopark and hand-copied papers of geological science, which enabled students to know further about the geological stories of their native place, whet their interest in learning geological knowledge and establish the sense of ownership in loving their native place and protecting geological relics.

“Introducing geological science into the homes of common people” finds favor with common people. A series activities for geological science popularization, including the “World Earth Day”, “National Science Popularization Day”, “Week of Scientific & Technological Activities”, “Street of Display Boards” and theme lectures, were carried out in neighborhoods, communities and the Farm Stays, residents and merchants around the Geopark. Additionally, the Wangwushan-Daimeishan Geopark Museum and the Popular Science Education Activity Center (“Center”) under the Geopark are open to citizens all the year round free of charge. The WeChat official account and official website of the Geopark

also update the latest dynamics regularly and post them promptly for citizens together with the knowledge about geological science so that citizens can come into “zero-distance” contact with the knowledge.

The study tour under the theme “Zero-distance experience of the Geopark” has become one of the primary attractions of the Geopark. To enable the students of local primary and middle schools to know about the earth, establish the awareness of protecting the earth and further enhance their capability of geological science popularization, the Administration cooperates closely with the Education Bureau of Jiyuan City and use the museum and the Center as important venues for the extracurricular practice

activities and study tours for the schools. So far in this year, about 20000 students from 30 schools, including the Zhicheng Experimental Middles School, No.1 Dayu Middle School, No.1 Jishui Middle School and Guangxi School, have taken part in the study tours of the Geopark. The activity took place in a vivid and dramatic manner, including free visit to the Geopark, distribution of popular science publicity materials, onsite explanations, and Q&A sessions, placing the students in zero-distance contact with the Geopark to experience and love it.

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Shennongjia UGGp Establishes a Popular Science Trail

Shennongjia UNESCO Global Geopark, China

As the QR code interpretation system was launched online in February 2019 for the interpretation panels of the geosites, rare animal and plant species, the Guanmenshan Popular Science Trail of Shennongjia UGGp was officially established.

Since Shennongjia UGGp initiated the construction of the Study-tour Popular Science Base in July 2018, the geologists, botanists and bird experts employed by the geopark have conducted surveys along the 8km long trail in the Guanmenshan Scenic Area, and designed a study-

tour trail consisting of a geology section, a botany section and a birdwatching section according to the geosite characteristics, plant distribution and bird activities. With the help of the experts, Shennongjia UGGp has written, designed and installed 40 geosite panels, 816 plates for 169 rare & endangered plant species, 160 bird plates and 6 bird science popularization panels for the trail.

In order to reinforce its popular science education, in 2018, Shennongjia UGGp took a series of actions. It developed a special plan for science research & popularization. The

Guanmenshan Popular Science area was selected as a Science Popularization Demonstration Base of Hubei Province and a Practice & Education Base for Study-tour of Primary and Middle School Students of Hubei Province. Study-tour routes have been designed and study-tour activities have been organized in cooperation with the Shennong Tourism Investment Group Co., Ltd. Agreement was signed with Luli Commune and IUCN experts on the development of the popular science book '100 Plant Species of Shennongjia'. Popular science summer and winter camps were organized with over 120 lectures for more than 4,100 school students. Student Education & Practice Bases was established in cooperation with 25 universities including Sun Yat-sen University and China University of Geosciences. Shennongjia UGGp is becoming a natural classroom for public education of nature sciences.

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1. Nature sciences winter camp
2. Installing plant plate
3. Popular geoscience class
4. Birdwatching guide panel
5. Bird science popularization panel

Sobrarbe-Pirineos UNESCO Global Geopark Presents "Subterranean Waters and Climate Change"



Sobrarbe-Pirineos UNESCO Global Geopark, Spain

The PIRAGUA PROYECT in collaboration with the Sobrarbe-Pirineos UNESCO Global Geopark, organizes a conference on "Subterranean waters and climate change".

The impact of climate change on subterranean waters depends, among other factors, on the type of geological formations (aquifers) in which they are. In karst aquifers, the subterranean water is characterised by high flow velocities and short transit times, these characteristics make vulnerable aquifers to any external change in the processes that generate the recharge, such as the decrease in precipitation and the increase in temperature



◆ Guided tour to the thermal natural spring



◆ Conference on Subterranean waters and climate change



◆ Explanations before going down to the thermal natural spring

predicted by the models of climate change, especially for high mountain areas.

The National Park Ordesa and Monte Perdido is the largest calcareous mountain massif in Western Europe, including the highest altitude karst in Europe.

In this conference we are going to present a synthesis of the hydrogeological research and the main results obtained until today as well as an advance of the research currently under development in the framework of the European project EFA 210/16 (PIRAGUA).

In the same way, the last explorations carried out by "Otxola

Speleology Group, Garcés system" will be explained and main theme of the day will be debated in a round table composed of experts in research, planning, management and conservation of water resources both inside and outside of the National Park Ordesa and Monte Perdido.

Finally, there will be a guided tour to the thermal natural spring "Os Baños" (Fuente de Puyarruego or Fuente de los Suspiros) in order to see its functioning in the hydrogeological framework of the National Park Ordesa and Monte Perdido.

www.geoparquepirineos.com

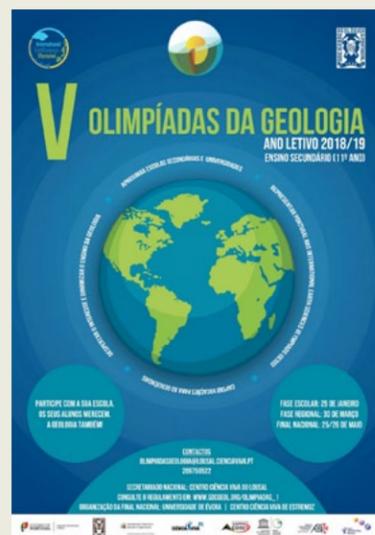


Participants of the National Phase of the Geology Portuguese Olympiads, including students from Azorean high schools.

Geology Portuguese Olympiads – Azores Regional Phase – 2019

Azores UNESCO Global Geopark, Portugal

For the 5th consecutive year, the Azores UNESCO Global Geopark (UGGp) is responsible for the Regional Phase of the Geology Portuguese Olympiads (“Olimpiadas Portuguesas da Geologia”) in the Azores Autonomous Region, with the participation of 19 students and their teachers from 5 high schools of the archipelago. The Geology Portuguese Olympiads is an annual contest promoted by the Geological Society of Portugal, with the support of



Poster of the 5th edition of the Geology Portuguese Olympiads (“Olimpiadas Portuguesas da Geologia 2018/19”).

the Ministry of Education and Science of Portugal, the Agency “Ciência Viva” (the Portuguese National Agency for Scientific and Technological Culture), Portuguese Universities, the Azores UGGp and the International Geoscience Education Organization.

The main goals of this geo-educational activity are to enhance the Geology education and learning, make it more dynamic and attractive to the students, approach high

schools and universities, raise awareness of Geosciences and choose the representation team of Portugal to the International Earth Sciences Olympiads (IESO) which in 2019 will take place in the Republic of South Korea (Daegu). This contest includes three phases (School Phase, Regional Phase, and National Phase), through which the students are selected to the next phase, and at the end, the three best classified students at the National phase will represent Portugal at the International Earth Sciences Olympiads.

In order to provide students a more enriched and exciting experience, at the time of the Regional Phase in the Azores archipelago, the Azores UGGp promotes a complementary activity program in close cooperation with its partners and stakeholders, including field trips to relevant geosites of the Azores UGGp, allowing the students to observe “in loco”, some of the Geology programmatic contents they deal during the classes.

Moreover, the 2019 Geology Portuguese Olympiads will allow the selection of students from Azores high schools (the ones with the higher classifications in the Regional Phase) to integrate into an exchange program



Portuguese team at the International Earth Sciences Olympiads, in Kanchanaburi, Thailand (August, 2018), that won three bronze medals.

between the Azores UGGp and the Leiqiong UGGp of China. This exchange program is implemented under the scope of the Sister Agreement signed in September 2018 between these two UNESCO Global Geoparks.

Since its first edition, the Regional Phase of the Geology Portuguese Olympiads operated by the Azores UNESCO Global Geopark (UGGp) have been running with remarkable success,

both in terms of the number of participants and professors/schools engaged, and the results obtained by the Azorean students at a national level: in the last two years Azorean students were “Olympic Champions” of the National Phase and thus, integrated the team that represented Portugal into the International Earth Sciences Olympiads held in France (2017) and Thailand (2018).

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Students visiting the “Gruta das Torres” lava cave geosite (Pico Island) - the largest cave in the Azores (5,150 m total length) – an activity promoted by the Azores UGGp at the Regional Phase.



Tour of Xingwen UNESCO Global Geopark Kicks Off



Xingwen UNESCO Global Geopark, China

On March 22, the Xingwen UNESCO Global Geopark welcomed more than 2,000 students in Grade 8 of Gongle Middle School in Xingwen County, kicking off the 2019 Geological Science Popularization and study-tour of the Xingwen UNESCO Global Geopark. The annual Geological Science Popularization and study-tour of the Xingwen UNESCO Global Geopark officially began.

Under the guidance of science

popularization teachers, the students visited the geological museum, clint groups, stone forest, fossil coenosis, Couple Peak, Tiankeng, Tianquan Cave and other representative rare geological sites, watched the science popularization video of the Xingwen UNESCO Global Geopark, attended the geological science popularization lecture themed on "Cherish Xingwen Karst", and actively participated in the contest of geological science popularization

knowledge, as well as team development training games. At the same time, the Administration Bureau of the Xingwen UNESCO Global Geopark issued a certificate of completion of the Geological Science Popularization and study-tour to the students who participated in the activity for encouragement and commemoration. Xingwen UNESCO Global Geopark innovated in this year's organization of events related to popularization of science. It



Students visit the geopark museum



Students take notes seriously



Students actively participate in the contest of geological science popularization knowledge



Students are awarded a certificate of completion of the Geological Science Popularization and study-tour of the Xingwen UNESCO Global Geopark



Students take a group photo in the clint groups

integrated education with various activities, allowing students to learn from on-site visits and personal interactions. With such efforts, the students could get interested in learning geological knowledge.

Since its launch in 2005, the Geological Science Popularization and Research Tour of the Xingwen UNESCO Global Geopark for primary and secondary school students has been organized for 15 years,

and has received more than 200,000 primary and secondary school students in groups. During this period, the Xingwen UNESCO Global Geopark has continuously innovated science popularization tour activities, carefully designed science popularization tour routes, improved the science literacy

of science popularization practitioners, enriched the connotation of geological science popularization activities, and attracted more and more students to enter the Xingwen UNESCO Global Geopark to carry out study-tour.

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Young Ambassadors Collaboration Program

Molina & Alto Tajo UNESCO Global Geopark, Spain

This year our Geopark has carried many actions, and the most important one is the election of young ambassadors, in collaboration with other Spanish Geoparks.

We found in different conversations with others geoparks in several international geopark conferences that we shared similar educational concerns.

We will begin with the coordination of teams, for which the heads of the two geoparks will put in contact with the management teams of the corresponding secondary school for the coordination of work.

We got in touch with the secondary school Doña Blanca de Molina and we will form a work team with secondary school teachers and those in charge of the educational area of the geopark, in order to organize the project.

This program has been integrated into the curricular development of the center, with the participation of all students being mandatory, having its corresponding score in the subjects that the topic affects them, History, Geology, Biology, English, etc.

The Geopark is an important part for members of secondary

school and include the main educational institutes.

Since January, visits to the Geopark have been made first with the professors of the secondary school so that they could organize the teaching in their class of each specialty, Geology, History, Biology, etc. Then we have gone with the students to teach them about the main geosites. Later, workshops and face-to-face classes have been organized at the secondary school by Geopark technicians.

These activities have been developed during the months of January- March, then all students have prepared a paper



on their Geopark divided into groups of three.

The preparation of the presentations have had the support of the secondary school teaching staff and the Geopark technical staff in such a way that not only they had to develop group work tools, but also the theoretical realization of the presentation, computerized presentation and presentation public thereof. This presentation was subject to an evaluation by secondary school teaching staff and Geopark technician during



the Cultural Week, from which two of the groups were elected. After that the chosen students

will have the opportunity to exchange with students from another geopark.



Danxiashan Book Sharing Events and Science Popularization Lectures

Successfully held in Over 100 Schools

Danxiashan UNESCO Global Geopark, China

In November 2018, Danxiashan UNESCO Global Geopark initiated the "Danxiashan: spectacular nature in the world" National Book Sharing Events, together with the Petroleum Industry Press and Geoparker Co., Ltd. Through these events, Danxiashan

presented the science books to schools across the country and held Danxia landform science lectures for teachers and students.

In the series of events, the Danxiashan Science Popularization Volunteers Team, which is mainly composed of

college teachers and college students, actively contacted the schools nearby and entered the classrooms to carry out lectures and to present science books. They disseminated Danxia landform scientific value and earth science knowledge, and explained the meaning

and initiatives of geological heritage protection. The science popularization lectures were not only held in universities such as the University of Science and Technology of China, but also in primary and secondary schools in a large number of cities such as Wuhan, Tianjin, Beijing, Shenzhen, and rural primary schools in Guizhou Province and Shandong Province, even in Hanchuan Disabled School.

Whether in cities or rural areas, in universities or primary schools, science popularization teachers have passionately and earnestly conveyed the knowledge of Danxia landform to every teacher and student. The science popularization book, Danxiashan: spectacular nature in the world (in Chinese: 奇美天成丹霞山), was written by Professor Dechen Su, who is a scientific advisor

of Danxiashan and the chief science popularization publicity expert of the Ministry of Natural Resources of China. Danxiashan and Danxia landform are illustrated vividly in this book. In addition, the book interprets two landforms which are similar to Danxia landform, Yardang and Caiqiu. Different scientific research routes for primary and middle school students are designed in this book as well.

UNESCO Global Geoparks such as Alashan, Yandangshan, Shilin and Dunhuang have joined the book sharing events. They planned to jointly organize book sharing events and lectures at local schools in April 2019. By March 30, 2019, the events had been successfully held for more than 100 times in high schools and primary schools covering 17 provinces including Guangdong, Beijing, Jiangxi, Hubei and Shandong, etc. More than 10,000 students and science popularization enthusiasts had participated in the activities. The activities have attracted a large number of people who look forward to witnessing the spectacular Danxia landform and Danxiashan UNESCO Global Geopark. Their devotion

to the great and profound earth sciences and their ideas of protecting the earth have been strengthened through the activities. More and more people are willing to involve in the volunteer service of geological conservation and geological science popularization.

Li guiqing & Xiaowei
Danxiashan UGGp, China

Danxiashan Book Sharing and Science Popularization Lectures were successfully held in the following 17 provinces :

No.	Province	No.	Province
1	Anhui	10	Chongqing
2	Guangdong	11	Jiangxi
3	Hubei	12	Hebei
4	Yunnan	13	Shanxi
5	Shaanxi	14	Jiangsu
6	Beijing	15	Guizhou
7	Shandong	16	Tianjin
8	Henan	17	Fujian
9	Jilin		



◆ Lecture in University of Science and Technology of China



◆ Lecture in Hanchuan Disabled School



◆ Students reading science popularization books



◆ Students reading science popularization books

High School Students Taking Action against Invasive Species

Oki Islands UNESCO Global Geopark, Japan

In Japan's Oki Islands Geopark, high school students are taking action, spreading awareness about and leading activities to tackle the problem of invasive species.

Oki possesses a mixed distribution of plants and animals from different climates and several endemic species. This unique ecosystem is deeply connected to the geohistory here and is an important part of the Oki



◆ Students present their project

Islands' geoh heritage.

However, this precious ecosystem has been affected by human activity, and now management and conservation measures are needed more than ever. In recent years especially, the damage to the native species from the spread of invasive species has become a major issue.

Originally from North America and belonging to the compositae family, the lanceleaf tickseed spreads at an extremely fast rate even in comparison to other invasive species. Because of the damage it is causing in Japan's ecosystems, it has been classified as a dangerous invasive alien species under national law.

On Oki, the Geopark quickly recognized lanceleaf tickseed as a problem, and worked with

local groups to find solutions. In 2017 the geopark began cooperating with a local high school to take action against the invasive species. This initiative took place as part of the Geopark's regional education program, which emphasizes fieldwork. One team of participating students chose lanceleaf tickseed as their project.

These students wanted to do more than just go out flower picking to reduce the problem; they decided to design and distribute laminated bookmarks illustrating how to identify lanceleaf tickseed as well as to organize lectures on invasive species.

Community-wide lanceleaf tickseed picking activities were held this March at the end of winter in coordination with localities from the Ministry of the Environment.

March was purposely chosen as the date for the activities because during this period, while the invasive species is more difficult to identify than in its spring flowering stages, it is easier to prevent the spread of its seeds. The participating locals used what they learned at the lectures and the bookmarks distributed by the high school students to successfully identify and remove lanceleaf tickseed plants.

One of the participating students, Chika Tanimoto, commented, "I learned that we can find ways to help our hometown all around us if we just look for them". The group of students who worked on this project will be presenting at the APGN Symposium in September, 2019.



◆ Teaching community how to identify lanceleaf tickseed



◆ Lanceleaf tickseed identification bookmark

Marine Littering Project in Gea Norvegica UNESCO Global Geopark



Gea Norvegica UNESCO Global Geopark, Norway

Marine pollution, and especially plastic litter, is a threat to wildlife in the sea. The garbage is found in all of the world's oceans, and everything, from the smallest to the largest organisms, living in shallow waters or at great depths, are indirectly or directly affected. The global community and most governments have started to address these problems, but there is a big job to be done, in which everybody has to contribute.

Knowing that people with an interest and knowledge about nature are significantly more likely to engage in preserving it, it is clear how important the educational work of the Global Geopark Community can be. With this in mind, along with a desire to act, Gea Norvegica UNESCO Global Geopark took initiative to start a marine littering project, and it quickly got funded by the Norwegian Ministry of Climate and Environment.

The idea is to bring students from schools located in our

member municipalities out to the coast or other polluted areas, and give them the possibility to learn about nature in combination with actively taking care of it, which is done through collecting litter. By now, several hundred students have been out picking garbage with us, and we experience that during a day out, all students start to show a dedication to this work. Their curiosity is the driving force, and they truly get the job done.

Gea Norvegica UNESCO Global Geopark is situated in south-eastern Norway, and our member municipalities make a total land area just above 3000 km². The coastline of the mainland is 507 km, but we also have a lot of island which brings an additional 867 km of coastline. In other words, we have a lot of space to work with. The project was started in 2018, and we recently secured funding to run it until the summer of 2020.

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◆ gea norvegica marine litter picking

Promoting Exchange and Cooperation in Various Approaches



Huangshan UNESCO Global Geopark, China

Since the beginning of 2019, Huangshan UGGp has actively promoted exchanges and cooperation in various approaches using the UNESCO Global Geopark Network Platform.

Firstly, we have strengthened cooperation with international organizations such as IUCN in response to the GGN Statutes. In 2014, Huangshan became the Protected Area of IUCN Green List. As the only

representative of the UGGp in the Chinese Green List Reference Group, Huangshan has participated in the revision and discussion of the Green List Standard for many times. This year, Huangshan will continue to make suggestions for the equitable and effective management of protected areas and further revise the Green List Standard. In addition, we participated in the field evaluation of Huangshan

GEF (Global Environment Foundation) project in this early March. We visited local product enterprises, farmers and surrounding communities to understand the help of GEF project to them, as well as their current challenges and needs. In the communication with GEF staff, we have found common goals and explored the possibility of cooperation in educational projects.

Secondly, we have carried



Photo exhibition in Beijing

out in-depth basic researches in cooperation with universities to explore the links between geolandforms, biodiversity and cultural heritage. Last year, Huangshan and Tsinghua University signed a cooperation agreement. According to this agreement, the two sides will carry out long-term scientific research and education activities. Now, we are continuing our research of the relationship between

geolandform and biodiversity of Huangshan Mountains and the mechanism of water use of Pinus taiwanensis under special geographical environment. In addition, this year, research on the link between geology and cliff carvings has been launched.

Thirdly, we have communicated with other UGGps. In March, Dunhuang UGGp visited Huangshan. We shared our experience

on the third revalidation in 2016, revalidation for other geoparks, panels design, museum construction and education activities. And we explained the photo exhibitions which were held in Beijing, Lesvos and Athens last year for the 10th anniversary of twinning partnership between Huangshan UGGp and Lesvos Island UGGp. The report of Italy conference last year was also studied.



Dunhuang UGGp in the seminar



Photo exhibition in Lesvos Island UGGp



Photo exhibition in Athens



Visit local lobster aquaculture with GEF



Visit community hostel with GEF

Hong Kong Youth Geo-conservation Ambassadors Went to Yandangshan UGGp to Investigate Geo-tourism

Yandangshan UNESCO Global Geopark, China

To further improve earth science knowledge exchange between youth of Yandangshan and Hong Kong, showcase the geo-tourism resources of Yandangshan and promote geo-conservation and communication activities, a Hong Kong delegation of more than 30 members including geo-conservation ambassadors and consultant teachers launched a four-day geo-tourism investigation in the Yandangshan UNESCO Global Geopark with the support of

Hong Kong Geomorphology and Rock Conservation Association and Hong Kong New Foundation Group from April 12th to 15th .

They successively investigated the geo-tourism landscape conservation work of the museum of Yandangshan geopark, and Fangshan-changyu cave park, which helped deepen their understanding on Yandangshan's geoheritage protection, geomorphological landscapes, rock structures

etc.

At the same time, Hong Kong geo-conservation ambassadors undertook deep exchanges and discussions with the staff members of Yandangshan global geopark administrative committee on the issues including the park construction management, development of park homestay, tourism promotion, economic development of surrounding communities, interpretation system, smart construction and so on. The youth geo-conservation ambassadors also hosted the academic seminars with the students in the Yandangshan tourism school and elaborated their own points of view on the issues including how to push forward the geo-conservation in the geopark, science popularization and geo-tourism, the participation of different stakeholders, and how to improve the interpretation system.



Hong Kong New Foundation Group Charitable Foundation and Hong Kong Geomorphology and Rock Conservation Association have jointly run "new foundation landscape travel" since 2008 aimed at popularizing the geo-conservation and geopark. In 2011 Hong Kong "youth geo-conservation ambassador training plan" was further launched to enhance the geo-heritage protection awareness of middle school students in Hong Kong and cultivate a batch of students who are ardent in the earth science and geo-conservation to become "youth geo-conservation ambassadors" to make contributions for the geological protection of Hong Kong through recruiting and organizing middle school students of Hong Kong to undertake education and training activities. The



Yandangshan UNESCO Global Geopark serves as one of the educational bases of the

plan due to its unique rhyolitic volcanic rock geomorphological landscapes.

Qinfei Lu

Yandangshan UNESCO Global Geopark, China





Huanggang Dabieshan UNESCO Global Geopark was Filmed in Homeland, Dreamland, CCTV4

Spring in wetland. Photographer Zeng Xianfeng

Huanggang Dabieshan UNESCO Global Geopark, China

At the end of December, 2018, film crew of "Homeland, Dreamland" in CCTV4 came to Huanggang Dabieshan UNESCO Global Geopark. After a two-week filming, a documentary lasting for 45 minutes named "National Nature Reserve" was filmed in CCTV4 on 17th January, 2019.

This documentary focuses on the nonrenewable geoheritage, unique plant resources and rare animals such as Chinese merganser of Huanggang Dabieshan UNESCO Global Geopark. By combining theoretic teaching with a large number

of pictures and photos, the green hills, clear water, charming rocks, rare flora and fauna of Huanggang Dabieshan UNESCO Global Geopark are vividly presented to the world.

More details:

<http://tv.cntv.cn/video/C22432/7957b14161ad47348ef0b3a5485ac30b>

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◆ Dancing in Paradise lake. Photographer Hua Ren



◆ Shoots in Homeland, Dreamland

Working Together for the Rich Heritage of Las Loras Geopark



Las Loras UNESCO Global Geopark, Spain

The first Exhibition-Market of artists, craftsmen and local producers of the Geopark took place at the last weekend of 2018. This initiative was the result of the work done throughout the year at different meetings, where the need of showing the enormous quantity and quality of human potential in the territory to the local population was brought to light. The initiative was very successful regarding its participation and dissemination.



◆ Detail of two handmade masks

Local development groups, associations and foundations which participated in the Geopark working group also attended the event. Thus, people coming for a visit were able

to get to know this sometimes unnoticed cultural heritage firsthand. Present were painters, writers, sculptors, weavers, music and traditional dances, beekeepers, farmers, blood sausage, cheeses and colt meat producers, leather artisans, etc. and they were able to show, sell, explain their artistic works and handicrafts to the people.

Identifying local artists and craftsmen and bringing them together in order to develop a partnership network and



◆ Site of the 1st Exhibition-Market of artists, craftsmen and local producers of Las Loras Geopark



◆ Local producers, artisans and artist of Las Loras Geopark



Mascaritos and Zamarrones Carnival parade

future projects is still the aim of the current year, as well as the agroecology project, in which local producers will be invited to work ecologically and conventionally so as to find consensual sustainable alternatives, always supported by research.

Apart from that, at the beginning of the year, the

Geopark had the opportunity of working together with ARCO association adding value to local cultural heritage, recovering a lost Carnival. Zamarrones and Mascaritos (typical and traditional characters wearing sheepskin, cowbells and masks) were on the streets again making their cowbells and noisemakers sound. This extremely moving

event of exchange and interaction with local population made older people go back in time and allowed younger people to learn about this old Carnival.

Working for the conservation and appreciation of tangible and intangible heritage in collaboration with local people is one of the aims of the territory which makes up the Loras.

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The Inheritance and Development of Ancient Doumu Pottery

Tianzhushan UNESCO Global Geopark, China

Tianzhushan UNESCO Global Geopark embraces not only picturesque natural landscape, but also profound culture. As one of important carriers of Tianzhushan cultural inheritance and display, Ancient Doumu

Pottery is a crystallization of wisdom and an important historical and cultural resource. In 2008, Doumu Pottery production process was listed as provincial intangible cultural heritage.

Tianzhushan UNESCO Global Geopark area has a long history of pottery production. Doumu Pottery has a complicated production process, including selecting delicate and pure yellow clay as raw materials,



and going through a total number of 14 steps with a span of around 25 days, such as hand-washing, casting, drying, finishing, calendaring, painting, sculpture and so on. There are more than 40 types of ceramic technologies, which combine practicability, ornamental value and usability, fully reflecting the creativity of folk pottery craft.

Ancient Doumu Pottery has held colorful art exchange and cultural experience activities and added more creative inspiration into pottery making, which provides a broader platform for the dynamic inheritance and innovative development of intangible culture heritage, opens a brand new window for Tianzhushan Geopark to expand cultural communication and cooperation and offers a favorable opportunity for

Tianzhushan to upgrade influence and reputation.

With the integration of culture and tourism, Ancient Doumu Pottery develops study tours to welcome more and more children, tourists and artists for visits, and intangible inheritance bases and education practice bases being set up here. The millennium kiln becomes thriving under the combination of production, study, research and tour. At present, tourists visiting Tianzhushan can not only enjoy the beautiful natural scenery, but also learn the most original technology and history in the dragon kiln.

With the development of society, Ancient Doumu Pottery artists constantly stick to innovation and cooperate with Anqing Normal University and Anhui Jianzhu University on the

basis of conserving the core intangible technology. More than 30 tourism commodities have been developed, including tableware, tea set, ancient musical instrument and pottery flute. Ancient Doumu Pottery has won consumers' recognition and praise with novelty features and outstanding environmental quality.

Doumu Pottery now enjoys broad market prospects both at home and abroad, which is conducive to the economic development, farmers' income and labor employment with remarkable social and economic benefits. Ancient Doumu Pottery artists will embrace the future with more steady steps.

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Pottery Making Performance



Ancient Doumu Pottery

Bamboo Lantern Workshop Illuminates the way to Conserve Local Mountain Environment in Muroto UNESCO Global Geopark

Muroto UNESCO Global Geopark, Japan

Muroto UNESCO Global Geopark is facing the ocean, at the same time, a large part of the Muroto UGGp land is covered by mountains. The biggest industry in Muroto is fishery and the ocean is very close to the local's lives. The ocean off Muroto is fertile fishing grounds because the mountains bring nutrients to the ocean. However, today's mountainous environment has slightly changed, and would affect on ecosystem in the ocean and fishery.

Not only in Muroto, but also all over Japan, the spreading abundant bamboo forest is one of the serious issues in mountainous environment. Because of its rapid-growing and invasiveness, bamboo forests cover a large area of mountainous land and block the sunlight which is necessary for other vegetation growing.

A bamboo lantern workshop, held at Muroto Global Geopark Center in March explained to 20



Everyone is satisfied with their works

participants the above situation surrounding bamboo forests. The workshop also showed how bamboo has been used as natural materials in our life. In Japan and several East Asian countries, bamboo was used as plateware, furniture, or other materials not very long ago. Lecturers who are bamboo lantern artists wanted the participants to know that bamboo could be functional material and elegant art works.

At the beginning of the workshop, lecturers shared background stories and characteristics of bamboo with

several pictures. Bamboos for the workshop were prepared by lecturers who thinned a bamboo forest. They shared how the mountainous environment was improved by thinning.

Then each participant got their bamboo with 20cm long and 10cm diameter and decided a rough design of their lantern arts. They used a drill driver to make holes in bamboo. People of all ages including parent-child pairs participated in the workshop and enjoyed lantern art works very much.

This workshop was not only for just making a bamboo lantern. Participants who used

actual bamboos cut on the mountains have gained a sense of contribution to improve the mountainous environment. At the end of the workshop, the lecturers revealed that the growing demand for plastic and declining demand for bamboos could be a reason why abundant bamboo forests have spread today. The lecturers themselves try to use as little plastic they can. Although choosing reusable materials is not necessarily connected with making bamboo forest stop spreading, the workshop gave participants beautiful bamboo lanterns as well as an opportunity to find an eco-friendly lifestyle.



Lecturers share bamboo stories with participants



A small child makes his own lantern



Participants' first lantern works with gentle light

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Canadian UNESCO Global Geoparks and Canadian Indigenous Peoples in Geoparks Meet in Tumbler Ridge UNESCO Global Geopark



Tumbler Ridge UNESCO Global Geopark, Canada

Representatives from the three Canadian UNESCO Global Geoparks, as well as members of the Canadian National Committee for Geoparks and the Canadian Commission

for UNESCO (CCUNESCO) attended a three-day conference in Tumbler Ridge UNESCO Global Geopark this January. The conference is the first official meeting of all Canadian UNESCO

Global Geoparks and the National Committee, and a commitment has been made for annual meetings to continue moving forward as a way of supporting Geoparks at the national

level. The official meetings were followed by the first ever Indigenous Peoples in Canadian Geoparks Roundtable Discussion, which included representation from eleven different Indigenous nations within Canada, as well as representatives from CCUNESCO and Canadian Geoparks.

UNESCO Global Geoparks have received strong support in Canada, with 3 designated sites established, two sites which have applied to UNESCO for evaluation in 2019, and an additional seven official Aspiring Global Geoparks supported by the Canadian National Committee for Geoparks. The meetings focused on the future governance of Geoparks at a national and regional level, opportunities for collaboration, and growing the UNESCO Global Geoparks brand within Canada. The delegates also had the opportunity to tour the Peace Region Palaeontology Research Centre and to go



Conference delegates in Tumbler Ridge UGGp

snowshoeing in the beautiful backcountry of the Tumbler Ridge Geopark.

As a nation, Canada is committed to reconciliation with the Indigenous peoples of the country. Hosting the Indigenous Peoples Roundtable was an important step for Canadian Geoparks in formal inclusion of Indigenous perspectives at the national level. With over 600 identified First Nations Indigenous

communities in Canada speaking over 50 different languages, Canadian Geoparks have a tremendous opportunity to celebrate and support the Indigenous communities who have studied the geology and geography of their territories for thousands of years. The discussions resulted in positive actions moving forward for both individual Geoparks as well as the national Canadian forum.

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Field Trip in Tumbler Ridge UGGp with Indigenous representatives and Canadian Geopark delegates



Dinosaur Discovery Gallery tour in Tumbler Ridge UGGp with Conference delegates

Training Courses to Enhance Geo-tour Guides' Capacity in Cheongsong UNESCO Global Geopark



Cheongsong UNESCO Global Geopark, the Republic of Korea

The geo-tour guides are among the important human resources who preserve the geo-heritages and develop the geopark in Cheongsong. There are currently 18 tour guides who have a variety of backgrounds, and their experiences enrich the explanations for geo-sites. Touring with the guides, a lot of visitors have been satisfied to learn not only about geological knowledge but also the cultures and the stories which Cheongsong has developed since a long time ago.

That is why the geopark team has highlighted the importance of self training and learning. The team provides some training courses twice a month with its annual plan focusing on the geo-tour guides' capacity building of. The training courses combine studies of geology and UNESCO global geopark with field visits of the geo-tour attractions in the

area of Cheongsong in order to maximize effectiveness of the trainings.

In January, a training course was held to help the geo-tour guides better understand the diversities of the geological features and review the values of the geo-heritages in Cheongsong. They also learned the similarities and differences between the Korean National Geopark, UNESCO Global Geopark and World Heritage. In February, there was a workshop dedicated to learn and discuss the unique importance of the geo-spots of Cheongsong. Through the workshop, the guides acquired a skill to explain the traits of the geo-sites. In March, some of the tour guides paid a two-day

visit to the County of Uljin to join the capacity building workshop provided by the province of Kyongsangbukdo. It was a great chance for the Cheongsong tour guides because they had a platform to meet and exchange ideas with peers from different cities and counties. For another day, the geopark team provided a visiting course to some geo-spots in the mountain of Juwang as learning by touring. It was a good opportunity for tour guides to exchange opinions and have discussions on the spots.

As it gets warmer, the Spring soon comes and so does the high season. The geo-tour guides are being well-prepared to welcome visitors in the high season.

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Workshop on Youth Engagement in Geoparks Conservation Held in Qeshm Island UNESCO Global Geopark

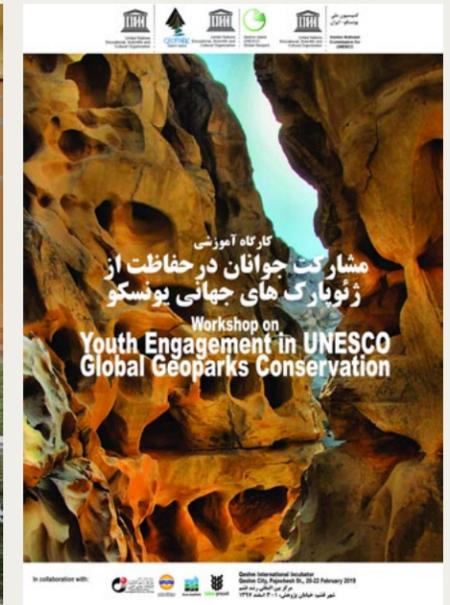
Qeshm Island UNESCO Global Geopark, Iran

The UNESCO Tehran Cluster Office in cooperation with Qeshm Island UNESCO Global Geopark and the Iranian National Commission for UNESCO co-organized the workshop on “Youth Engagement in UNESCO Global Geoparks Conservation”

in Qeshm Island on 20-22 February 2019. The Geological Survey & Mineral Explorations of Iran (GSI), Qeshm Free Area, and Tabas and Aras National Aspiring Geoparks also collaborated with the organizers and supported the event.

The objective of the three-day workshop was to engage young women and men as active citizens towards sustainable development and peace in their communities, and also to empower youth in the Geoparks to play a leading role for mitigating challenges related to the climate change and mass tourism. The workshop brought together 35 young participants living around Qeshm Island, Tabas and Aras National Aspiring Geoparks areas respectively and national experts from different institutions including the Geological Survey & Mineral Explorations of Iran (GSI), GINA Private Institute, the Regional Research Centre for Safeguarding Intangible Cultural Heritage in West and Central Asia under the auspices of UNESCO and Qeshm Island UNESCO Global Geopark.

At the opening ceremony of the event, Ms. Maryam Soltanzadeh, the Officer-in-Charge of the UNESCO Tehran Cluster Office, welcomed the participants and



addressed the importance of the youth involvement in developing geologically characterized areas such as Qeshm Island. The Qeshm International Incubator hosted the sessions where facilitators shared their knowledge with the young participants on different themes such as Ecosystems, Employability through Geo-products, Geo-conservation, Sustainable Tourism, Disaster Risk Reduction, etc. In addition, two colleagues from FAO Representation in the Islamic Republic of Iran displayed their most recent youth programmes in a booth that was set up in the hall of the venue.

The workshop concluded by a field trip to the most relevant sites within Qeshm Island

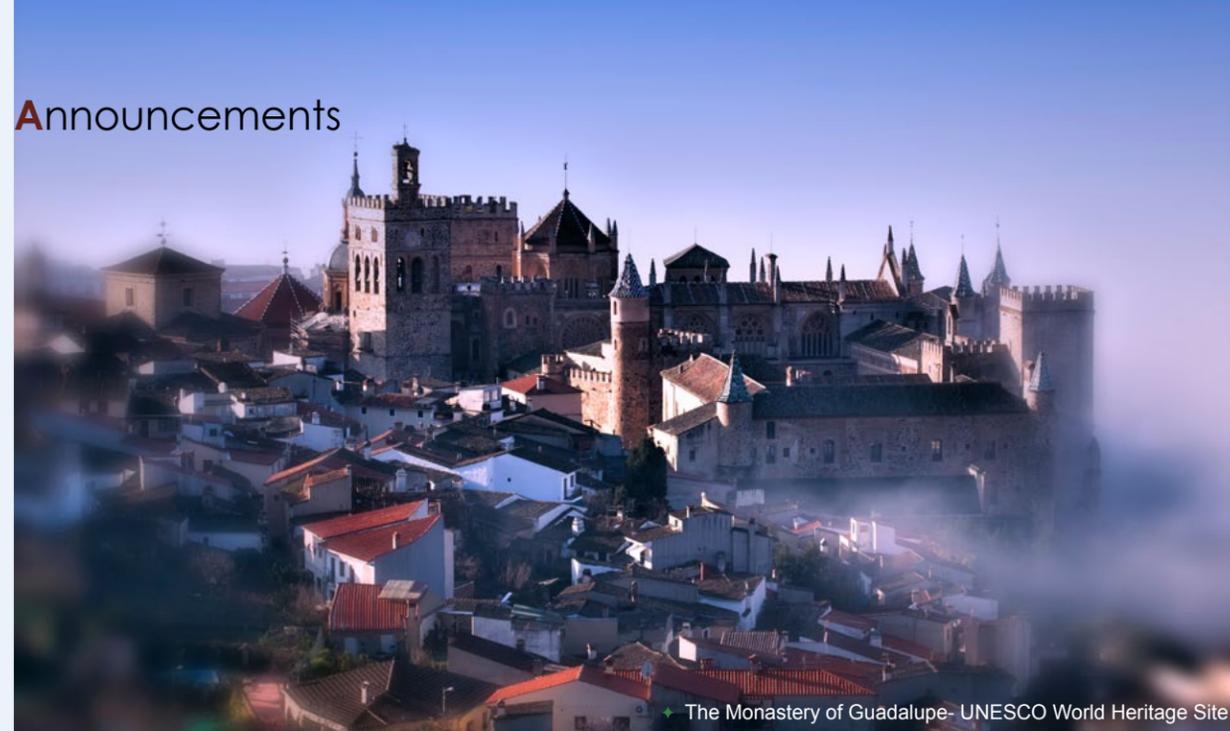
UNESCO Geopark. The young people present expressed their gratitude to the organizers for the opportunity which has helped them understand how a Geopark

operates and encouraged them to get engaged in the very core of the Geoparks management and conservation.

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• The Monastery of Guadalupe- UNESCO World Heritage Site

International Meeting on the Ediacaran System and the Ediacaran – Cambrian Transition, October 2019



Villuercas-Ibores-Jara UNESCO Global Geopark, Spain

The International Meeting on the Ediacaran System and the Ediacaran–Cambrian Transition (IMECT 2019) will be held on October 17th–24th, 2019, in Guadalupe, the Villuercas-Ibores-Jara UGGp main village. The Universities of Madrid and Extremadura and the UNESCO Global Geopark take part in the organization that have the support of the International Subcommittee on Ediacaran Stratigraphy and the International Subcommittee on Cambrian

Stratigraphy. The meeting is open to presentations on all aspects of the Ediacaran System and its boundaries, including organisms and their interpretation, litho/ bio/chrono/chemo- and event stratigraphy, sedimentology, geomicrobiology, (bio) geochemistry, geochronology and geodynamics. Particularly welcome are contributions dealing with the nature of the Ediacaran–Cambrian transition. In Spain,

Brasier, Perejón & San José, 1979, described stratigraphical overlap of what was then considered pre-Cambrian and Cambrian faunal elements. Afterwards, the stratigraphical distribution of early skeletal fossils and trace fossils in this Ediacaran back-arc setting episodically affected by pulses related to the Cadomian Orogeny has brought this topic into sharp focus. Recent publications have raised the question if there is a sharp divide between organisms typical



• *Cloudina carinata* holotype will be visited during the field trip

of respectively the Ediacaran and Cambrian or a more gradual transition and overlap.

Another topic of recent interest and debate is the number and nature of Ediacaran glaciations. In addition to the well-established probably regional ~580 Ma Gaskiers glaciation, a range of other putative Ediacaran glacial events, likely of regional extension, have been reported. A recent addition to an upper Ediacaran glaciogenic event is the peri-Gondwanan ~565 Ma “Weesenstein-Orellana glaciation” (Linnemann et al. 2018) with outcrops in the Central Iberian Zone.

A pre-conference field trip is organized that will provide an opportunity to explore some of the scenery and geology of the Villuercas-Ibores-Jara Geopark. Planned stops include examination of upper Ediacaran deep-water sediments; *Cloudina*-bearing carbonates in the area of Castañar de Ibor; examination of block containing type material

of *Cloudina carinata* in the Cañamero visitors centre; and Ordovician Armorican Quartzite with *Daedalus* and *Cruziana*.

The post-conference field trip will examine a range of upper Ediacaran sedimentary environments within the southwestern part of the Central Iberian Zone:

- The “Weesenstein-Orellana glaciation”;
- *Cloudina*-microbial buildups developed on an unstable platform locally uplifted by the influence of the Cadomian Orogeny, Villarta;
- The Ediacaran-Cambrian transition in La Nava de Ricomalillo, with trace fossils and *Beltanelliformis* carbonaceous compressions in offshore siliciclastics, and *Cloudina*-bearing slope aprons in nearby Arroyo de Cubilar,
- The Arrocampo section with shallow-water carbonates interrupted by slope-apron breccia deposits overlain by siliciclastics containing Cambrian-

type trace fossils.

The conference venue will be in Guadalupe. It is a historical municipality of 2000 habitants situated within the Geopark spectacular mountainous landscape. It is the location of the Royal Monastery of Santa María de Guadalupe, a UNESCO World Heritage Site . In addition to a rich cultural and geological heritage in Guadalupe and its surroundings, may be noted botanical diversity and very limited light pollution resulting in spectacular night skies. Companies within the geopark provide opportunities for guided tours to explore the geology, landscape, wildlife and astronomy.

Please, find more information on <http://www.geoparquevilluercas.es/imect2019>

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