

✦ Mogao Grottoes of Dunhuang (China)



✦ Zhijindong Cave(China)



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✦ Mount Apoi Global Geopark (Japan)



✦ Pollino (Italy)



✦ Tropic conical karst of Gunung Sewu (Indonesia)



✦ Spectacular exposure of the Lower Pillow Lavas in the Maroullena river of Troodos (Cyprus)



✦ Lanzarote and Chinijo Islands Geopark (Spain)



✦ Sitia Global Geopark-Miocene fossils sea urchins (Clypeaster) (Greece)



✦ Reykjanes (Iceland)



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# Qingling Zhongnanshan Teenage-Children's Camp Held the China-Germany Education Festival this Summer

Qingling Zhongnanshan UNESCO Global Geopark



Recently, Teenage-Children's camp of Qingling Zhongnanshan UNESCO Global Geopark united German Experiential Education Institute, Germany iYouth Education Center, Beijing Changjiyuan Education Science and Technology Co., Ltd., Xi'an Ming'en Culture Communication Co., Ltd. to hold China-Germany Education Festival named "seeing·dream--China-Germany teenager growth program".

The "growth program" activity is one of travel research series that set up by Qingling Zhongnanshan UNESCO Global Geopark. This summer camp is divided into three stages. Nearly 200 Chinese and German students participate in the first stage of the event. Based on the theory of experiential education in Germany, combined with the research results of the German Experiential Education Institute for the past 20 years, the park's popularization science team introduced iYouth education in Germany, to guide the students to put down the book, go into the wild, to experience the quality education in Germany without going abroad. In the meantime, based on principles of the all-round development of youth, to achieve the goal of growing up with a real experience, the park institutes sustainable project planning for 8 to 22 years old Chinese and German adolescents to let them

achieve stage growth target of "confidence, independence, strengthen, consciousness", achieve the purpose of seeing-dream.

Qingling Teenage-Children's Camp is launched by Qingling Zhongnanshan Global Geopark in 2015, and is the first camp for popularization science education, travel research, forest adventure, entertainment and parents-child campaign. The camp has a variety of experience projects, such as tent camping, tree house, hive, walking in the clouds, strop, rock climbing, tree down, rope tower, the ladder, picnic and jungle CS, the archery, mountain bike and so on.

The camp has attracted nearly 50 thousand young children from Shanghai, Beijing, Guangdong, Shaanxi, Fujian, Jiangsu, Shandong, Sichuan, Yunnan, Gansu and other provinces and cities of China, as well as South Korea, France, Germany, to carry out geological teaching, animal and plant cognition, natural wilderness experience tour training and research.



# Shennongjia

## Attracts Significant Geological Interest

Chen Jinxin, Administration Bureau of Shennongjia UNESCO Global Geopark

From May 31st to June 3rd, a team of 8 geologists including graptolite expert Dr. Jorg Maletz from the Free University of Berlin and Prof. Wang Xiaofeng from Wuhan Center of China Geological Survey conducted a field survey in Shennongjia UNESCO Global Geopark on the sedimentary sequence since the Proterozoic, the classification, distribution and comparison of the graptolite fossils in Shennongjia. They concluded that Shennongjia preserves South China's most perfect fossil sequence of the late Ordovician – early Silurian graptolite, which provides important scientific evidence for the amendment of the stratotype section and points of the global bottom boundary line between the Aeronian Stage and the Telychian Stage.

On June 3rd, a field survey team consisting of 6 geologists including Prof. Donald E Canfield from the University of Southern Denmark, Mr.

Qu Lesheng from Hubei Geological Survey, Prof. Zhang Yongchang from the Research Institute of Petroleum Exploration and Development, etc. visited Shennongjia Geopark and made detailed record and analysis on the geological sections. The experts considered Shennongjia Group is the linking section between the Jixian standard section of early Mesoproterozoic and the standard section of late Proterozoic, and believed that the research on the black shale and the volcanic rock in Shennongjia will provide important evidence for further understanding of China's Mesoproterozoic geological evolution and potential of oil and gas resources.

Shennongjia Geopark became a Chinese national geopark in 2005 and joined the Global Geoparks Network in 2013. The complete set of strata of 1.6 billion years, abundant fossils and various tectonic relics preserved in Shennongjia Geopark have provided excellent materials for geoscience research and attracted many domestic and foreign experts. In recent years, over 100 field missions by more than 500 experts have been received and geoscience research projects have been carried out in cooperation with nearly 20 research institutions such as Chinese Academy of Geological Sciences, All-China Commission of Stratigraphy,



◆ Dr. Jorg Maletz visiting the Geo-museum



◆ Prof. Donald E Canfield observing tillite of Nantuo Formation

China University of Geosciences, China Geological Survey and etc. Shennongjia UNESCO Global Geopark has become a hot area of geological interests. Through field visiting and training by experts, cooperative research projects and research achievement sharing, the geoscience research of Shennongjia Geopark has developed rapidly and laid the foundation for the conservation, management and development of the Geopark.



◆ Dr. Jorg Maletz examining the geological section



# Tianzhushan Co-organizes the 8<sup>th</sup> Seminar of Professional Board on Metamorphic Rocks

## Tianzhushan UNESCO Global Geopark

From April 15 to April 19, the 8th Seminar of Professional Board on Metamorphic Rocks was held in University of Science and Technology of China (USTC) and Tianzhushan. More than 200 experts and scholars from more than 20 universities and research institutions, such as Peking University, Nanjing University, Zhejiang University, China University of Geosciences, etc. and USTC attended the seminar.

The conference, composed of seminars and field inspection, was hosted by Professor Xiao Yilin. Academician Zheng Yongfei made a speech and gave a theme representation, and 74 experts made academic reports on five subjects

such as Metamorphism of the Subduction Zone and Orogenic Belt, jointly exchanged the latest research progress in metamorphic geology and relevant fields, discussed the existing problems and made clear the future development and research hotspots.

From April 18 to April 19, experts and scholars entered into Tianzhushan UNESCO Global Geopark, and inspected the HP-UHP metamorphic belt in the southern area of the geopark, the UHP metamorphic rock outcrops in Yezhai, Xindian, Wumiao, Bixiling and Hanchangchong, and the granite rock mass in the northern area of the geopark, respectively. Participants

were interested in the outcropped eclogite, garnet peridotite and jadeite quartzite, and they made a discussion and communication. Experts fully affirmed the progressive work Tianzhushan had achieved in the protection of geological heritage, geo-science popularization and the development of geo-tourism. The geopark provides an interactive platform between geologists and the common people, popularizes the geosciences, disseminates the scientific knowledge, enhances the awareness of environmental protection, and promotes the sustainable development of regional economy and society.



◆ Experts are visiting the Hanchangchong scientific spot



◆ Experts are visiting the Xindian scientific spot

# UNESCO Fellowship Programme Visits Itoigawa UNESCO Global Geopark

Fellowship Programme conducted by the Japanese National Commission for UNESCO

Itoigawa UNESCO Global Geopark, Itoigawa, Japan

From February 28<sup>th</sup> to 29<sup>th</sup>, seven guests representing the National Commissions for UNESCO in China, Korea, Thailand, Malaysia, Germany and Japan visited the Itoigawa UNESCO Global Geopark as part of an annual Fellowship Programme conducted by Japanese National Commission for UNESCO.

The Fellowship Programme is held yearly by the Japanese Commission to promote fellowship and exchange among UNESCO Commission staff in the Asia Pacific Region. This year, a member of the German Commission was also invited to join. The group visited various UNESCO-related regions in Japan, including the World Heritage Site of the Historic Villages of Shirakawa-go and Gokayama, the Hakusan Biosphere Reserve, Kanazawa, a member of the UNESCO Creative Cities Network, as well as Itoigawa UNESCO Global Geopark.

The program in Itoigawa included presentations on the UNESCO Global Geopark program, the features and activities of the Itoigawa UNESCO Global Geopark and the Japanese Geoparks Network and how it works to promote the geopark model in Japan. The visitors then toured the Fossa Magna Museum where they could learn about the wealth of geological



◆ Participants pose with Itoigawa Geopark Chairman Toru Yoneda

features in the Itoigawa region, how they can be used to tell the story of the formation of the Japanese Islands and how they have shaped the lives and culture of not only the people of Itoigawa, but Japanese society as a whole.

The tour culminated in an excursion to the Oyashirazu Geosite, where the Northern Japanese Alps collapse directly into the Sea of Japan. This impressive geological formation, a relic from when Japan was attached to the Asia mainland, formed a natural boundary throughout Japan's history. Through participating in exchange programs like this one, the Itoigawa UNESCO Global Geopark hopes to continue to spread the Global Geopark model and facilitate networking among Geopark regions.



◆ Participants learn about jade and the formation of the Japanese Islands in the Fossa Magna Museum



◆ Group photo at the Oyashirazu Geosite

# The Popular Science Interchange Activity Launched **by** Shilin and Hongkong Global Geoparks

Huang Yali, Shilin Global Geopark

Yunnan Shilin Global Geopark has welcomed the exchange group from Hongkong Global Geopark composed of 37 students and 4 teachers at July 1, 2016. This activity is launched by Hongkong Global Geopark, jointly organized by Shilin Global Geopark, whose aim is to strengthen the communication between the two places.

Teachers and students from Hongkong KAU YAN College went to the first middle school in Shilin County, which was founded in 1937,



communicated with its teachers and students one by one, visited the schoolyard under their guidance, learnt the history of the used to be Southwest Associated University. After that, Hongkong student representative introduced the basic situation of Hongkong KAU YAN College. Students from both Hongkong and Shilin learnt together archaic Yi script and language from the Sani branch of Yi people and to sing the Yi song, whose name is "Guests from afar, please stay". Everyone knew each other very



soon in the common learning and communication, gave presents to each other, left contact information to each other. The atmosphere was very harmonious when learning folk dance. A local arrangement was casually increased after activity, which is that Hongkong students went to supermarket to shop under Shilin students' guidance and had to back within a limited time. Just a half day contact, students from the two places have established a profound friendship, kept taking pictures, reluctant to part farewell. During the 5-day trip, the Hongkong Global Geopark exchange group visited Shilin Global Geopark, Naigu Shilin Scenic Area, Shilin Karst Geological Museum, Jiuxiang cave scenic Area, Longmen Grottoes scenic Area, Yunnan Provincial Museum, Intangible cultural heritage protection area of Guandu, et al. The students

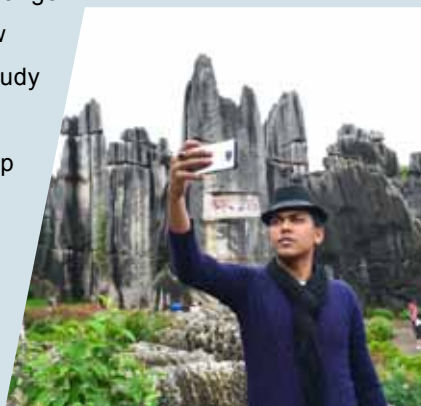






and teachers has appreciated the beauty of Shilin Global Geopark, learnt the history of Yunan and Kunming, experienced the extensive and profound intangible cultural heritage, such as making chess pieces of Go. The collections in Shilin Karst Geological Museum and Yunnan Provincial Museum made them eye-opening. "The trip and study in Shilin and Kunming made everyone benefited." Ye Minyi said, teacher from Hongkong KAU YAN College. The exchange activity was spoke highly of by first middle school in Shilin, got the careful organization of the school, hoped to continue provide opportunities for young people afterwards. This exchange activity let them closely know about Hongkong students' study and life, and let them have a chance to establish friendship with Hong Kong students, this is a big harvest in their journey of life. Wu Shanbin, the supervisor of Hongkong Global

Geopark, said the exchange activities among Global Geoparks can help to advance youth's curricular knowledge and sight. At the same time, communication can let Hongkong youth know about hinterland directly.



# Leiqiong UNESCO Global Geopark and Vulkaneifel UNESCO Global Geopark Sign Agreement of Sister Geopark Relationship

## Leiqiong UNESCO Global Geopark

The 6<sup>th</sup> International Maar Lake Conference, hosted by the organizing committee of IAVCEI, commenced in Jilin University (in Changchun city) from July 30 to August 3, 2016. Leiqiong Global Geopark sent representatives as per invitation to the conference, delivering a theme talk titled the Maars in Leiqiong Global Geopark. During the exchange seminars of the conference, Leiqiong UNESCO Global Geopark and Vulkaneifel UNESCO Global Geopark formally signed a Sister Geopark Agreement on July 31, 2016. Both will enhance exchanges and cooperation in geoscience research, resources conservation, geopark management and personnel training. Mr.Xing Guoming, Vice Director of the Office of the Managing Board of Leiqiong UNESCO Global Geopark, Dr.Martin Koziol, Director of Maar museum Manderscheid, also Member of the board of the German Volcanological Society, Liu Jiaqi, academican of the Chinese Academy of Sciences, and relevant leaders attended the ceremony.

Maar type volcanic lake is rare and unrenueable precious geo-resource in the world. It is a natural yearbook and natural museum for scientific research of paleoclimate and paleoenvironment. The maar lake in Vulkaneifel of Germany is the starting point of European and even the world's research on maar lakes. Zhanjiang Huguangyan is



◆ Group photo after signing agreement



◆ Sister-park cooperation agreement signed by both geoparks

typical representative of Chinese maar lakes. Huguangyan maar lake is one of the best preserved volcanic crater lake in China and even in the world. The sediments of the lake are regarded as a natural yearbook for transition of natural environment. Huguangyan is the starting point for China's research on maar lakes, also an important base for the world's research on maars.

The establishment of the Sister

Geopark relationship between Leiqiong UNESCO Global Geopark and Vulkaneifel UNESCO Global Geopark, will be of important significance to promote effective conservation, complementary advantages, sharing of resources and a win-win pattern. The sister relationship will further our two nations' friendship and will input new dynamic powers to sustainable developments of the geoparks.

# Shennongjia and Haute Provence Become Sister-parks

By Wang zhixian and Chen Jinxin, Shennongjia Global Geopark

From April 7<sup>th</sup> to 9<sup>th</sup>, local time, a delegation from the UNESCO Global Geopark Shennongjia, China visited the UNESCO Global Geopark Haute Provence, France. The two parks signed a partnership agreement officially and become sister-parks. Upon the invitation by the UNESCO Global Geopark Haute Provence, a delegation of six members from the UNESCO Global Geopark Shennongjia arrived in Digne les Bains in the evening of April 7<sup>th</sup> and started this visit. Dr. Guy Martini, Director of the UNESCO Global Geopark Haute Provence and Mrs. Patricia Granet, Mayor of Digne warmly welcomed the delegation.

On April 8<sup>th</sup>, the delegation visited some geo-heritage and cultural sites of Haute Provence including the Ammonite Slab, the Peroue Gorges, the Barles Gorges, the Estoublon Village and etc. In the evening, a signing ceremony was held in the townhall of Digne les Bains. After brief introduction to both parks, Mrs. Patricia Granet, Mayor of Digne, Mr. Claude Payan, Mayor of Barles, Mr. Mu Bo, Deputy Mayor



✦ Shennongjia Delegation and local government leaders

of Shennongjia Forestry District and Mr. Li Liyan, Deputy Director of the Administration Bureau of the UNESCO Global Geopark Shennongjia signed the partnership agreement. Both parks agree to develop mutual exchange and cooperation in respect of management of geoparks, conservation of geo-heritages, interpretation of geo-heritages and geo-science education, habitat restoration and population rehabilitation of endangered species, environmental and biological monitoring, research and survey, and development of tourist products and services.

During the celebration party after the signing ceremony, Dr. Guy Martini said

he would never forget his evaluation mission to Shennongjia in 2013, the perfect combination of geology, ecology and culture of Shennongjia Geopark impressed him very much, and he hopes the cooperation between both parks will benefit the development of all UNESCO Global Geoparks. Mr. Li Liyan agreed that the future of the partnership between the two parks is very promising, and he invited Mrs. Patricia Granet and Mr. Claude Payan to visit Shennongjia at a proper time. On April 9<sup>th</sup>, after visiting the local characteristic market, the delegation concluded the visit and left Haute Provence.



✦ Visiting cultural site



✦ Signing partnership agreement

# Shennongjia and Villuercas-Ibores-Jara Become Sister-parks

By Wang zhixian and Chen Jinxin, Shennongjia Global Geopark

On April 16<sup>th</sup>, the representatives from the Shennongjia UNESCO Global Geopark, China and the Villuercas-Ibores-Jara UNESCO Global Geopark, Spain signed a partnership agreement in Beijing and officially become sister-parks. Upon the invitation by several UNESCO Global Geoparks in China, a delegation from Villuercas-Ibores-Jara UNESCO Global Geopark, Spain arrived in Beijing on April 15<sup>th</sup> for a visit to Chinese geoparks. Shennongjia also sent an invitation to the delegation. However, the delegation won't be able to visit Shennongjia this time due to the tight schedule, so both geoparks agreed to sign the sister-park agreement in Beijing.

In the morning of April 16<sup>th</sup>, the representatives from Shennongjia and Villuercas-Ibores-Jara had a meeting in Beijing. Ms. Rosario Cordero Martín, President of the Provincial Deputation of Caceres said the delegation felt very sorry that they couldn't visit Shennongjia



◆ Representatives of the two geoparks

this time, and she wishes the two parks will soon have reciprocal visits. Mr. José Ma Barrera Martín Merás, Director of Villuercas-Ibores-Jara Geopark said he is very confident that the cooperation between the two parks will be extensive, because the two parks are similar in geological structure, landform, biodiversity and some other aspects. The representative of Shennongjia invited the delegation to visit Shennongjia at

a proper time. After the meeting the representatives of both parks signed the sister-park agreement. According to the agreement, the two parks will carry out exchanges and cooperation in respects of geopark development and management, geoscience research and education, geotourism promotion and capacity building, etc.



◆ Signing sister-park agreement



◆ Introducing Shennongjia Geopark



# Commemorating Emperor Yan's Achievements Writing A New Chapter of Cultural Tourism

By Wang zhixian and Xu xuefeng, Shennongjia Global Geopark

April 26 in lunar calendar is the date of birth of Emperor Yan, the ancestor of Chinese people. On this day of every year, the grand ritual ceremony is held in Shennong to commemorate Emperor Yan's achievements. During this year's ceremony, Shennongjia carried out a series of activities to pass down the spirit of folk ritual activities, meanwhile, writing a new chapter of Shennongjia cultural tourism.

10:09 am, June 1, 2016, the ritual ceremony of Shennong, which was sponsored by Shennongjia Global Geopark was officially initiated.

Over 460 people of various circles of society standing at the square, participated the ceremony.

With the striking of the drums and bells, various kinds of ritual activities

were carried out in order. Lighting candles, burning incense, sacrificing wine and foods, reading condolence, incensing and making wishes and bowing to Emperor Yan has been an indispensable procedure during the ceremony. The dancing and singing performance shows Emperor Yan's achievements to his descendants again, making them realize Shennong's selfless, hardworking and tough spirits.

The trees and flowers are all in full blossom in Shennongjia in July. According to the ritual ceremony, Shennongjia Global Geopark develops a series of travelling activities, aiming to deepen communication and provide rich tourism products to visitors.





# Holy Water Festival

## the Inheritance and Development of Cultural Brand in Wudalianchi Global Geopark

Si Yongchao, Wudalianchi Global Geopark

Volcanoes and mineral springs are the rare natural resources of Wudalianchi Global Geopark and the core value of geological

heritages. The mineral spring water of Wudalianchi is formed by volcanic eruption and called as Holy Water because it can treat many diseases,

therefore the Holy Water Festival has gradually formed. This festival is not only an annual significant grand ceremony, but an important



cultural brand for Wudalianchi Global Geopark. On June 7<sup>th</sup>, the 33<sup>th</sup> Holy Water Festival of Wudalianchi Global Geopark was grandly opened and launching a big opening celebration, a dragon boat racing, an evening of entertainment, drum dance and other local folk performance. Tourists from all over the country and local residents gathered to celebrated this large folk festival.

The International Round-Volcanoes Half-marathon 2016 has been held during Holy Water Festival. About 2000 athletes, from Russia, America, China and other countries, participated in the race. This race has made the model of “Internet plus Sports plus Tourism” come true and widely publicized the local cultural brand. Moreover, the large myth song and dance drama “Holy Water and Mountains with Everlasting Love of Five Lotus Flowers” has first performed in Wudalianchi during the Holy Water Festival. The creative source of this stage play is from local folk culture, myths and legends.



Meanwhile, the Holy Water Festival has hundreds of years' history. Historically, every year before the festival, people from Oroqen, Ewenki, Manchu and Han nationalities all happily gathered to celebrated this godsend holy water and held activities for celebration. Therefore, the Wudalianchi Volcanic Holy Water

Festival has gradually formed. What's more, Wudalianchi's Holy Water Festival became one of the Chinese Hundreds of Festivals in 1992, the first batch of Intangible Cultural Heritage of Heilongjiang Province in 2007 and officially listed as the National Intangible Cultural Heritage in 2010.



# Making Every Effort to Manage the Geopark and Popularize Geoscience, Greeting the Revalidation of UNESCO Experts with a New Look

In recent years, great progress and outstanding achievements have been made in geoheritage conservation, geoscience popularization, construction and management of the geopark, communication and cooperation in Wangwushan-Daimeishan UNESCO Global Geopark. We have been sticking to the principles of strict conservation, unified management, scientific planning and sustainable use. It has been awarded many honors like “One of the Top Ten Beautiful Landscapes”, “the Most Beautiful Geopark of China”, “the first prize of Advanced Team Award for Geosciences Education”, and “Advanced Team in Land Resources Management System of China”.



◆ Group photo of Wangwushan-Daimeishan UNESCO Global Geopark geosciences summer camp

## Comprehensive Upgrading and Promoting have been Carried Out.

Great importance has been attached to the comprehensive rectification based on the six recommendations given by the experts in last revalidation. The leading group for rectification has been established and improvement plan has been made. Many improvements including infrastructure construction, newly built science popularization education centre



◆ Sign the agreement about Teaching and Science Study Practice Base between Henan polytechnic University and Wangwushan-Daimeishan Global Geopark to build friendly and cooperative relationship.



◆ Group photo of Wangwushan-Daimeishan UNESCO Global Geopark geosciences summer camp



and upgrading of Wangwushan-Daimeishan Geological Museum and six science popularization trails have been made. Between 17<sup>th</sup> to 20<sup>th</sup> July, the two experts from UNESCO named Setsuya Nakada and Martina Paskova appreciated the efforts made in the construction and rectification of the geopark during the past four years.



◆ Newly built science popularization education centre ◆ Center of Scientific Education

### Great Success has been Achieved in Geoheritage Conservation

The overall plan, geoheritage conservation plan and science popularization education scheme have been compiled to strengthen the conservation and supervision of geoheritages. The geoheritage conservation database was established and regulations for geopark management and



◆ Inspection on the geoheritages

◆ The 10<sup>th</sup> anniversary exhibition of Chinese global geoparks



◆ Training camp activity of the popular science volunteer

## Promotion

geoheritages conservation have been issued. Signboards for conservation and interpretative science popularization have been set up at the significant geosites within the geopark; the newly found geoheritages in Jiyuan Basin have been recorded and conserved, and protection fence has been built. Moreover, the geoheritages within the geopark are patrolled on a regular basis; the persons who damage the geoheritages and science popularization signboards will be charged criminal liability.



✦ Training camp activity of the popular science volunteer

## Colorful Science Popularization Activities have been Carried Out

“Geoscience popularization into school, community and scenic areas” has been carried out. Since 2012, geosciences education activities have been carried out on every Earth Day on 22 April and Geosciences Education Week. The activities including “The 10<sup>th</sup> Anniversary Exhibition of Global Geoparks in China”, science popularization lectures, geosciences popularization summer camp, science knowledge contest, agritainment geosciences training, prized collection of geopark photographs, etc. Besides, 25 volunteers from 10 colleges in China have been recruited to carry out science popularization camp activities. The volunteers are encouraged to involve, experience, learn and diffuse the geosciences popularization, geoheritage conservation and special characteristic economy by Wechat and blog, etc. to comprehensively promote the reputation and influence of Wangwushan-Daimeishan UNESCO Global Geopark.



✦ Wangwushan-Daimeishan UNESCO Global Geopark Museum



✦ Wangwushan-Daimeishan UNESCO Global Geopark Museum

# A new way to view our *beautiful world*

## Magma UNESCO Global Geopark, Norway

Great technology trends grow quickly. In 2013, Magma UNESCO Global Geopark, alongside technology- and communications agency Doublethink embarked on an ambitious project with support from the Norwegian UNESCO Commission, the Rogaland County Council and several independent funds and sources, including the EU, NORA, the Nordic Cultural Fund and others. Our aim was to find a brand new way to communicate and show the beauty and intricacy of geoparks to audiences young and old using new and exciting technologies; at the same time reaching a new generation of children and young adults on their terms and proving that geology and natural sciences can be fun, inspiring and available to everyone.

After three years of huge time consuming research, testing and development, along with significant economic investments, we are now proud to announce one of the world's most ambitious and largest virtual reality projects: geoVR.

By combining and implementing 360-degree images, live videos, custom 3D scenes, custom interfaces, voice- and text based storytelling and state of the art



hardware, geoVR creates a unique immersive experience for its users. Through the geoVR platform, users will be able to explore, experience and learn about geology and geoparks like never before, from anywhere in the world, regardless of age, economic stature, location or physical limitations. People who otherwise would have no chance of experiencing the scenic geoparks will now be able to explore them in a virtual world.

It is a unique way to showcase

real world scenery, historical transformation, geological knowledge and natural science, combining natural science learning and educational material with gaming technology and beautiful sceneries. With near limitless sources of science, history and stories to be told from the numerous global geoparks, geoVR is an essential tool for these parks to showcase themselves and their many riches.

From now on, the geoVR project will be continuously updated and filled with new content from a number of different regions, including Canada, Scotland, Northern Ireland, Norway, Iceland, the Faroe Islands, Greenland and Russia.

You are most welcome to join us and participate.



For more information, please write us at [post@geovr.no](mailto:post@geovr.no), or see [www.geovr.no](http://www.geovr.no)

For a sample of content and possibilities, please see: <https://youtu.be/AYBWGb8T9Uk>

# Yuntaishan Geopark

## Setting up Popular Science Tourism Routes from Multiaspects

### Yuntaishan Global Geopark

As one of the first batch of Global Geoparks, Yuntaishan has been gradually developed to be a well-known geopark around the world for its famous water and mountain landscapes. The mission of Yuntaishan Geopark is to pursue the integration of popular science and tourism that tourists can learn scientific knowledge during their visit. A lot of innovating and testing work has been conducted with abundant and encouraged achievements by Yuntaishan Geopark.

### Tourist guide training for popular science tourism

Those geological relics not only have appreciated out view, but also contain scientific connotation with mysterious and attractive stories, which is hard to interpret by professional signboards and panels. Tourist guide is a bridge to tell and orally explain these feel touching stories to tourists. Yuntaishan Geopark has employed national famous specialists to write teaching and training books based on the situation of the geopark, including "Yuntaishan Reading Guide", "Earth Village Exploring (Geology popular science training book)", "Professional knowledge must be learned by geological tourism guide", "Learning from geological view of Jiaozuo", "History of Yuntaishan", "Interpretation of typical Yuntaishan geological relic landscapes", "Rock Institution" and etc. Recently over a hundred tourist guiders have been organized for theoretical and route interpretation training by the geopark management bureau to insure those guide have real understanding of the geopark, so that each guide knows geology and can give interpretation about the geopark. The successful experience of guide training by Yuntaishan Geopark has been confirmed by experts from UNESCO, and has been suggested to share such successful experience globally.

### Promoting digitalization for popular science tourism

Recently Yuntaishan Geopark has established five in one self-media platform, including official website, microblog, wechat, App, simplified website, to advertise and exhibit Yuntaishan. In order to make geological science popular, interpretation can be get by wechat app about every corner of the geopark, which contains text, video, illustrations and cartoon demonstration.





### Final exhibition arrangement of the new museum is in progress

Along with the rapid development of the geopark, the existing museum can no longer meet the popular science demand neither the scale nor the content. The new museum is under construction, and the construction is on the stage of decoration and exhibition arrangement. The new museum is located at the core popularization of science tourism route of Yuntaishan, including eight themes and other two service sections which are multifunction movie house and tourist service centre. This museum is going to established with functions of science research, science popular, tourism, education, entertainment and display. In addition, geology displaying rooms have been planned and constructed in other gardens.



### Various activities for promoting popular science tourism

Thousands of domestic and foreign visiting teams come to Yuntaishan to investigate and study. Events such as Shennong Cultural Festival, Taichi Cultural Festival, Taihang Red Leaves Day, and Seven Sages seminars are held annually. Recently, the 2016 Yuntaishan Geopark popular science summer camp has been launched by the geopark and Chinese Academy of Geological Sciences in the fields of geology, animal, plant, climate, and history etc., which has been planned and implemented by geology experts and outdoor exercise specialists, and professionally set for children. Observation and practice can be integrated with funny and scientific knowledge learning during such activities.

### Popular science with research

The popular science tourism should have the support of science research achievements. Since the establishment, Yuntaishan Geopark has enforced science research, protection and development, and set up strategic cooperation relation with over ten science research units and colleges to be the base of science research and teaching practice. Over twenty geology and tourism monographs have been completed, such as "Study on the formation of Yuntaishan Landscapes", "Study on the Geology Background of Yuntaishan Main Landscapes", "Comparative Study on Yuntaishan and American Canyon Landscapes", "Control Effects Study on East Asia Rift Valley to Yuntaishan Landscape" and "Yuntaishan Culture Series Books". Over a hundred doctors and masters have completed their graduation projects at Yuntaishan, and tens of research papers have been successively published. Yuntaishan has greatly enhanced and enriched the scientific connotation of the geopark on the base of these scientific research achievements, and give support to popular science tourism and geological relics protection.

# Universities from China and Canada Hold United Practical Course in Huangshan

Wei Li, Difeng He, Shengming Yu, Runze Chen, Huangshan Global Geopark

Recently, over 40 students and their teachers from School of Geography and Ocean, Nanjing University, China and School of Geography and Environment, University of Waterloo, Canada have arrived in Huangshan Global Geopark to research on the progress of Huangshan sustainable development.

The Research and Communication Center of Huangshan Sustainable Destination has made the report of "Go into Huangshan, Explore Our Beautiful Home", and has seminar with students on the 4 parts of this report: "Ecological mountain, Green home", "Cultural mountain, Spiritual home", "Systematical management, Responsible act", "Extensive cooperation, Let dreams fly".

Students have been in different districts in the geopark to research on geography, landform, climate, water, animal and earth in Huangshan to search for a way of reaching sustainable development with minimum influence on environment.

University of Waterloo has cooperation with Nanjing University for years. Huangshan Global Geopark is the research base of land resource and tourism management for Nanjing University. Together with Nanjing University, Huangshan Administrative Committee established the postdoctoral mobile station for sustainable tourism research. Then education projects of Nanjing University and University of Waterloo will all have a field trips taken in Huangshan Global Geopark.



# A Contest on Scientific Popularization was Held in Wudalianchi Global Geopark

Si Yongchao, Wudalianchi Global Geopark

Scientific popularization is a basic work in Wudalianchi Global Geopark. From April this year, a four-step plan for scientific popularization was carried out by the Scientific Research and Management Center which is to step in schools, communities, government and service groups. After going through lots of geological data, thesis and history-related materials, the integrated materials were made and expressed in terms that are readily understood and learned. Propaganda activity in school is the emphasis of scientific popularization. Six lectures on popular science was made for primary and middle schools, the contents consist of volcanic geology, biology and ecology, mineral spring waters and some relative knowledge about global geoparks. The commentator of Scientific Research and Management Center made field test about the reaction of mineral spring waters with tea, the volcanic eruption test with volcanic model, also using the earthquake inductor and rock samples to enhance the interests of popularization and making Wudalianchi become the paradise of scientific education. On July 6<sup>th</sup>, Wudalianchi Global Geopark held a contest about Wudalianchi's volcanic geological and cultural knowledge. The contest themed on Protecting



Volcanic Resources and Building Beautiful Hometown and the scientific knowledge include volcanic geosciences, the volcanic eruption history of Wudalianchi, the world volcanoes distributions, the principle of mineral springs physical therapy, the local holy water cultural, the human origins and natural and social science, etc. The 15 selected volunteers from the contest will establish a scientific popularization team to introduce Wudalianchi for tourists and local residents in different tourist attractions and communities. Moreover, they will also participate in various investigations and researches of mineral springs, geosciences and ecological distributions.





"Jurassic adventure" video screenshot

# Zigong showed "Jurassic adventure" this summer

## Zigong Global Geopark

4D sci-fi movie "Jurassic Adventure", whose protagonist is Zigong dinosaur mascot, was released in Zigong Global Geopark this summer. This is also the first science fiction animation in the park with the prototype of a dinosaur.

The story took place in the mysterious ancient Bashu lake, 160 million years ago. A group of warriors from Oriental Dragon Palace, whose name were Chuanchuan, Xiaotaibai, Shuxiaobao, Bobo, Changtouxia and Lingrui, bravely step on the way of

seeking magical springs to help a friend suddenly with strange disease, and deduced an adventure journey of friendship, responsibility, courage and wisdom. The six main characters in the story are selected from the collections of Zigong dinosaur mascot all over the world in 2013. The warriors have their own names and personality over the years of enrichment and improvement. Their images have been upgraded from 2D to 4D, became a lively and lovely baby on the screen.



On 22 January 2016, Hong Kong Global Geopark of China (HKGP) hosted the "Hong Kong Global Geopark of China Gourmet Competition". The competition was co-organized by HKGP, the local Food and Beverages Association, and the local Chamber of Commerce. This was a new initiative by HKGP to promote geo-tourism and regional sustainable socio-economic development. A total of 11 restaurants and cafes joined the gourmet competition

The competing dishes were varied, from Western to Chinese style, and from main dishes to desserts (photos below). HKGP staff provided advice to the contestants to help them create and design geopark-themed cuisine. The judging panel comprised the Director of Agriculture, Fisheries and Conservation (Dr Leung Siu-fai), the Chairperson of the Country and Marine Parks Board (Mr Tang King Shing), and the Managing Director of Messel Pit World Heritage Site (Dr Marie L. Frey). The Chairperson of the Sai Kung Food and Beverages Association (Mr Hiew Chin) also attended the special event. The judging panel carefully reviewed and assessed the dishes of each contestant in Sai Kung Town.

"The exceptional food and presentation with innovative geopark themes are impressive," said one member of the judging panel. "It's difficult to select a winner."

The judging criteria included the relevance of the geopark theme, creativity, taste and presentation. The chefs of the participating restaurants exchanged a lot of





# Hong Kong Global Geopark of China Gourmet Competition

# 2016

Hong Kong Global Geopark of China



◆ Judging Panel (right)



◆ Man Nin Wah Roasted Meat Restaurant: Layer by Layer



◆ Chez Raymond De Paris: Lava-like Assorted Melting Cheese



◆ Mike's Chicken Comida de Portugal: Portuguese Geo-Toast

creative ideas with the HKGP staff when preparing their creations. “We’re delighted to work together with other stakeholders to promote our food and Hong Kong Global Geopark at the same time,” said one chef. For the special occasion, L’hotel Island South, a geopark hotel, designed two special cold drinks – “Choco Rocks” and “Seaside Hexagon” – to celebrate the first

HKGP Gourmet Competition. “Hong Kong Geopark has long been an active participant in regional activities, playing the role of coordinator,” said a spokesman for HKGP. “Sai Kung Town, which is one of the local communities within the unified boundary of HKGP, is a very successful example of mutually beneficial cooperation between the geopark and the community. This

gourmet competition, for example, was well received because of strong support from local community and other stakeholders. We’re trying to provide a richer travel experience for geopark visitors and at the same time inject new vigour into the regional economy. HKGP will continue to devise new initiatives in order to promote sustainable socio-economic development.”

# Muroto UNESCO Global Geopark Deep Sea Expo 2016

## Muroto Global Geopark

We call sea deeper than 200 m the “Deep Sea.” Sunlight can hardly reach there and the temperature is around 2-4 °C. It’s just like being in a refrigerator. This extreme “Deep Sea World” is very close to the lives of people living in Muroto.

The land of Muroto is formed from the layers at the bottom of the deep sea by plate tectonic movements. Therefore, the geological record of the deep sea is engraved under the ground of Muroto. Everywhere, you can find and touch the fossils and traces of animals that lived in extreme environments, and traces of patterns on the sea bottom made by the flow of water.

The sea on the east side becomes suddenly deep from about 2-3 km off the coast. This is because there is a steep cliff, with a depth of 1000 m, on the east side of the cape. Deep seawater travels with the ocean current, reaches the cliff and finally



✦ Flyer

upwells towards the sea surface. In the eastern region of Muroto there are several set net-fishing spots, and sometimes valuable deep sea creatures, rarely witnessed worldwide, come up with the net. As you can see, Muroto is a place that’s all about the deep sea, whether you’re on land or in the ocean. So

this year, “Muroto UNESCO Global Geopark Deep Sea Expo 2016” is being held to make it possible to fully enjoy the deep sea of Muroto. At Muroto Global Geopark Center, there are exhibitions of the deep sea and deep-sea creatures, such as videos and real specimens. The main exhibition is a mock-up of a huge deep-sea shark, known as the “mega-mouth shark.” A group of students at Muroto High School joined together to make this mock-up. You will be overwhelmed by the size of it for sure. You can also encounter deep-sea creatures at “Aqua Farm,” the deep seawater intake facility. At “Sea-rest Muroto,” a hot bath relaxation facility using deep seawater, you can experience feeling like a deep-sea fish. For lunch, you can enjoy “Muroto Kinme Don,” Muroto’s premier dish, which is made with kinme, or alfonsino—a deep-sea fish.



✦ high-school student working together



✦ Marine isopod(Bathynomus doederleini)



✦ trace fossil

# UNESCO Global Geoparks Celebration Forum – Towards a new age of geoparks –

The UNESCO Global Geoparks Celebration Forum was held in Hakusan Tedorigawa Japanese Geopark on 23 to 24 January 2016. The forum was organized by the Japanese Geoparks Network, along with the Hakusan Tedorigawa Geopark and the Operating Unit Ishikawa/Kanazawa, and Institute for the Advanced Study of Sustainability, United Nations University to celebrate the birth of UNESCO Global Geoparks, and discuss the future direction of Japanese geoparks.



In keynote speeches, Dr. Patrick McKeever (Chief of Section Earth Sciences and Geo-Hazards Risk Reduction Section, UNESCO) addressed the groundbreaking significance of the UNESCO Global Geoparks to UNESCO, followed by Dr. Koichiro Matsuura (former

Director General of UNESCO) who discussed the mission of UNESCO and global environment protection in the global community. Lastly, Dr. Hiroyuki Matsuda (member of the Japanese National Committee for Man and the Biosphere (MAB) Programme) identified how Japanese Biosphere Reserves have learned from Japanese Geoparks. During the panel discussion, panelists debated how to connect sustainable development and geoparks, and the contributions that the Japanese Geoparks can make to the Global Geoparks Network. During the workshop that took place on the following day, participants further discussed the topic of networking and international contribution, and identified a number

of possibilities for future engagement with the global network. Japanese geoparks intend to work toward these in preparation for the 7<sup>th</sup> International Conference on UNESCO Global Geoparks in the English Riviera UNESCO Global Geopark this September.



# 8<sup>th</sup> Japanese Geoparks Network Training Workshop

The 8<sup>th</sup> Japanese Geoparks Network Training Workshop was held in Hakusan Tedorigawa Japanese Geopark and Dinosaur Valley Fukui Katsuyama Japanese Geopark from 24 to 25 January 2016. The event was hosted by the Japanese Geoparks Network, and both geoparks.

In order to explore the theme of the workshop, “How to establish a geopark: Revealing the stories of the Earth hidden in ordinary landscapes”, participant groups were divided into three groups of different environments (coastal, mountain, and basin) where they searched for the “geo-story” of the area. They then created an action plan for how we could utilize these local resources as a geopark, and created recommended courses for geotours. Each group presented their work, which included geotours surrounding a regional specialty of Fugu-no-nukazuke (ovaries of puffer fish pickled in fermented rice bran), heavy snowfall, and industries that utilize local water.



# Itoigawa Geopark Co-Hosts Geoparks Niigata International Forum Expanding Networks in Eastern Asia from Niigata, Japan

## Itoigawa UNESCO Global Geopark, Itoigawa, Japan

The Itoigawa UNESCO Global Geopark, located in the Japanese Prefecture of Niigata, is in close proximity to two Japanese National Geoparks—Sado Island and Naeba-Sanroku. On July 27<sup>th</sup> and 28<sup>th</sup>, these three Geoparks partnered with the Prefecture of Niigata in order to host the Geoparks Niigata International Forum in Niigata City, Japan.

This forum brought together representatives from around Eastern Asia, including guests from China, Korea, Malaysia, Mongolia, the Philippines, Russia, Thailand, Vietnam and Japan as well as from UNESCO. During the first day of the Forum, the guests gave presentations on the nature of geopark activities and networking within their respective countries. The first day, held in a workshop format, encouraged audience participation as guests and attendees alike discussed the strengths and weaknesses of Geopark networks in Eastern Asia.

The second day of the Forum featured three keynote speakers, Dr. Atsushi Matsuoka of Niigata University, Dr. Eugenia Bugdaeva of the Far East Branch of the Russian Academy of Science, and Dr. Patrick J McKeever, Chief of Section of the UNESCO Section on Earth Sciences and Geo-Hazards Risk Reduction and IGGP Secretary. These three speakers joined other Geopark presenters, as well as special guests from Mongolia and Russia, in a panel discussion about Geoparks, their networks in Eastern Asia and the possibility of establishing Geoparks in their respective countries. Through the Geoparks Niigata International Forum, our shared goal is to increase awareness of Geopark activities throughout Asia and revitalize and empower networks not only among its many Geoparks, but among its numerous aspiring regions. These goals were outlined in a Forum Declaration to be shared on the forum's website at a later date. (<http://www.city.itoigawa.lg.jp/geopark-forum/en/index.html>)

Following the forum, attendees took part in one of two excursions, either to Sado Island Geopark or Itoigawa UNESCO Global Geopark. Visitors to Itoigawa explored the story of the world's oldest jade working culture, born along a plate boundary.



➤ A representative from Thailand presents on Geopark Activities there



➤ A panel discussion concluded the two day forum



➤ Attendees visit the Kotakigawa Jade Gorge Geosite in Itoigawa UNESCO Global Geopark



◆ International Union of Geological Sciences (IUGS) 69<sup>th</sup> Executive Committee Meeting was Held in Shilin, Yunnan

# International Union of Geological Sciences 69<sup>th</sup> Executive Committee Meeting was held in Shilin UNESCO Global Geopark, Yunnan

International Union of Geological Sciences 69<sup>th</sup> Executive Committee Meeting was held in Stone Forest Global Geopark on January 18<sup>th</sup> and 56 participants from 14 countries including China, Switzerland, Spain, the United States, Canada, Japan, Britain, France, Italy, Russia and other countries attended the meeting.

During this meeting, committees, professional committees, thematic

working groups, some membership organizations and other organizations affiliated with the International Union Geological Sciences reported all the work in 2015 and discussed work task in 2016; decided 2016 strategy, activities arrangements and financial plans; Some participants would also carry out field excursion in the Stone Forest Global Geopark, Kunyang Phosphorite Mine and Precambrian-Cambrian boundary at Meishucun

section.

The International Union of Geological Sciences was established in 1961 in Paris, France where the UNESCO headquarters is; it is a member of the International Council for Science. In November 2015, UNESCO's 38<sup>th</sup> General Assembly approved formally the new UNESCO "International Geosciences and Geoparks Program (IGGP)" and the relevant regulations and guidelines, and all the existing



◆ Zhang Hongren (right), former President of the IUGS, former vice-minister of Ministry of Geology and Mineral Resources of P.R. China, was awarded IUGS honor medal.

global geoparks have been included in the Program and became UNESCO Global Geoparks. The International Union of Geological Sciences is a highest level international academic organization in the fields of the world's geosciences. According to the agreements with UNESCO, the IUGS will annually recommend UNESCO experts to carry out field and copy evaluation and provide professional science assessments to UNESCO, which plays an important role in the global geopark designation and revalidation.

China began to declare and develop global geoparks in 2003. At present there are 186 national geoparks distributed in 31 provinces, cities and the Hong Kong Special

Administrative Region, among which 33 are global geoparks, ranking first in the world. After the Stone Forest became a global geopark in 2004, local authorities allocated annually 30 million in park conservation. A four-level management system (Bureau-Town-Village committee-village), was established ensuring effective management of the park area. The park has achieved a lot in scientific research. The management model is advanced.

The meeting indicated that IUGS fully affirmed achievements in Chinese geoparks. Stone Forest Geopark has become a reference site in research, protection and management home and abroad. Stone Forest Geopark management pattern has provided valuable experience for other

geoparks and made it most known worldwide.

At the same time, this meeting will play a solid foundation for the park's revalidation June this year.

R. Oberhänsli, president of the IUGS, BAI Xingbi, deputy director general, Department of Science, Technology and International Cooperation, Ministry of Land and Resources of P.R. China, Zhou Linchun, director general of Stone Forest Geopark Administrative Bureau, made a speech respectively at the opening ceremony. Zhang Hongren, former President of the IUGS, former vice-minister of Ministry of Geology and Mineral Resources of P.R. China, was awarded IUGS honor medal.