Boletín No 2– Junio 2013

Contenido

1. Palabras de la Editora

Por: Dra. Nury Morales-Simfors , Investigadora, Swedish National Defence College, Suecia, ***nusi0453@gmail.com***

Expresamos nuestro agradecimiento a la Red Europea de Geoparques y al Dr. I-Ling Kuo por sus oportunas colaboraciones para el presente Boletín. Sea esta la ocasión para invitar, una vez más, a los colegas de GOAL para que compartan sus resultados de trabajo e investigación para el próximo número del Boletín (setiembre).

We want to thank the Network of European Geoparks and Dr. -Ling Kuo for their collaboration with the publication of their outcomes in this Newsletter. We invite the GOAL members to share with us their research results.

2. The Geopark Harz · Braunschweiger Land · Ostfalen and its landmark concept

By; Sandra Bösel, Practitioner, Regionalverband Harz e. V, .Natur- und Geopark, Hohe Straße 606484 Quedlinburg, Germany..
reuter@harzregion.de

The Geopark Harz · Braunschweiger Land · Ostfalen is located in Northern Germany and encloses the Harz Mountains and the "Braunschweiger Land" up to the Flechtingen Ridge. The whole Geopark area is about 9.600 km2 and it contains more than ten districts in the German federal states Lower Saxony, Saxony-Anhalt and Thuringia. Europe´s largest Geopark is carried by two responsible associations: the “Regionalverband Harz" in Quedlinburg, an organisation essentially formed by the rural districts of the Harz Mountains in the southern part and the registered society called "Femo", which is in charge of the northern part. The Geopark Harz · Braunschweiger Land · Ostfalen was certified as a National Geopark and is also integrated in the networks of the European and Global Geoparks.

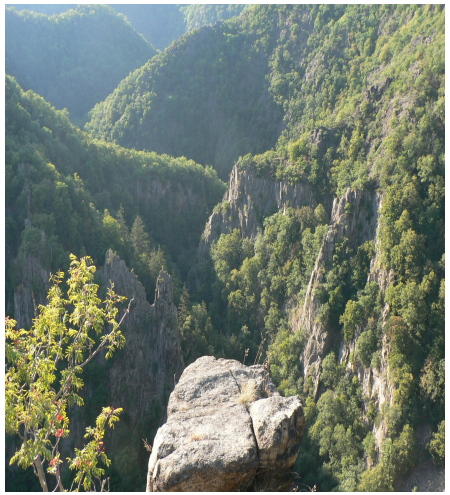

Photo. 1: *The Brocken - the highest mountain of the Harz.,* ***Photo 2:****. Bode Valley - the Grand Canyon of the Harz.,* ***Fig. 3:*** *Teufelsmauer (Devil´s Wall) in one of the first German nature reserves. Photos cortesy of RVH*

The Geopark has a remarkable geological variety. It includes amongst others the Silurian shale, plutonic rocks, iron ores, lignite and salt deposits. In consequence of the strong folding of the Harz there are different rock types side by side. Along the thrust many excellent outcrops allow a marvellous insight into the sediment history. Even the famous writer Johann Wolfgang von Goethe (1749 - 1832) studied the geology in this region. Additionally the region contains some important places for the discovery of the early history of men like prehistoric graves and famous excavation localities, e. g. the Neanderthal men from Salzgitter and from the Unicorn cave, the Schoeningen Spears as the oldest hunting weapons of men.

The Geopark Harz · Braunschweiger Land · Ostfalen and its landmark concept

Continuation

The Harz has a very old mining tradition. It began 3.000 years ago in the Bronze Age. Due to mining the Harz was well explored. Therefore there are still different facilities and institutions which deal with the geology of the Harz, e. g. museums, mines for touristic use and the Technical University of Clausthal.

The Geopark developed an area-wide net of landmarks and geopoints which emphasize the geological variety of the Harz and its outlands. Landmarks are widely visible and particularly well-known ground points. They serve as a first orientation. Famous landmarks in the Geopark are e. g. the Brocken (with 1.141 m the highest mountain in the Harz), the Wernigerode Castle and the Bode Valley. Around the landmarks there are different geopoints which can be connected to individual routes. Geopoints are hiking destinations or facilities of special interest. That includes e. g. natural outcrops, stone pits or mines open for visitors. They give us a view back into the history of the earth. Some geopoints are museums which welcome and guide guests. Other geopoints are located in nature and offer information by panels and orientation by signposts. Geopoints in the Geopark are e. g. the UNESCO World Heritage Site Rammelsberg in Goslar, the Unicorn Cave and the mystical Teufelsmauer (Devil´s Wall). The Geopark publishes leaflets in German and English language for every of its 19 landmarks which are very popular and gladly read by visitors. Some are also translated into French.

For more information and for download of the *leaflets*: www.harzregion.de

Legends and tales of the Harz Mountains:

The Brothers Grimm collected their stories from various places, primarily the area around Kassel about 40 miles to the west, but the Harz Mountains have long been famous as an important source of German folklore. Many of these stories are well-known outside of Germany as well: Cinderella, Hansel and Gretel, Sleeping Beauty, Rumpelstiltskin, Tom Thumb, Little Red Riding Hood, Rapunzel, The Frog Prince, and The Wolf and the Seven Kids. More information: http://archive.org/details/legendstalesofha00lauduoft

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3. Interpretation: how to communicate complex or scientific geological information to audiences in geosites.

By: Dr. I-Ling Kuo, Senior Lecturer, Tourism, Transport, Sports and Creative Industries , London Metropolitan University,, Uk
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Photo 1: *Interpretation panel about the eruption of the Unzen Volcano in 1990. Photo credit: I-Ling Kuo*

Interpretation is widely used in places attractive to visitors, be it historical monuments, religious sites, arts and cultural institutions or natural/outdoor areas. When implemented effectively and appropriately, interpretation not only greatly aids the successful management of the site, but also heightens visitors' experience and enhances their appreciation and knowledge of the site. Interpretation may be considered as a form of communication between the site managing agency and the visitors. As in all forms of communication, it is necessary that both message sender and message receiver 'speak the same language', or it is highly probable that there will be a communication breakdown. In the context of tourism, interpretation is an educational activity, but the audiences are non-captive and may have different motivations for visiting the site, diverse interests, varying degrees of prior knowledge and they are likely to let their attention wander if they do not find the interpretation materials or messages of use to them.

Sites of geological significance are often popular tourist destinations. These sites may include the formation of landscapes and geo-features, as well as ecological resources such as vegetation and wildlife. Although many visitors may have a basic knowledge of geology, it may be insufficient to grasp interpretative information if it is overly complex or written with too much jargon. In addition, geology is little taught in curricula at school level in many countries. In other words, visitors' prior knowledge of geo-sciences and related jargon may be limited.

Nevertheless, this is not to say that visitors have a deficiency in understanding complex or scientific messages. The issue is how site management agencies compose interpretation using approachable language without compromising scientific integrity whilst integrating interpretation into the overall site management strategy. The rule of thumb is, remember that your audiences (visitors to the geoparks) are not geologists and they are here to enjoy a good day out. They may be experts in their areas of profession and many of them maybe highly qualified and educated. Thus, it is imperative for the site managing agencies not to dumb down on the depth and breadth of interpretation contents but be aware not to overestimate visitors' attention span whilst not underestimating their intelligence.

Interpretation: how to communicate complex or scientific geological information to audiences in geosites.

Continuation

Visitors do not want to be ‘talked at’ but ‘communicated with’. Good interpretation connects with visitors; it relates to visitors’ concerns, feelings and emotions. Good interpretation makes information come alive and it can encourage visitors to change and modify their inappropriate visit behaviour voluntarily therefore supporting the site and resource management. The aim is, through interpretation, to provide visitors with a better understanding of the cultural, natural and geological significance of the geopark and they are therefore more likely to not only have an enjoyable visit experience, but also to be more sensitive towards the resources and geological features that have attracted them to visit the geopark in the first place.

More information about the Unzen volcanic area Global Geopark:
http://www.unesco.org/new/?id=63053.,
http://www.globalgeopark.org/aboutGGN/list/Japan/6481.htm

Photo 2*: Homes and buildings destroyed and buried by the volcanic eruption and the subsequent landslides are preserved and used as a Museum educating visitors about the geological hazards, Unzen Volcanic Area Global Geopark, Japan*
Photo credit: I-Ling Kuo

Photo 3: *Recent events of the Unzen Volcano Japan.*
Photo IAVCEI

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4. Geología Médica: una disciplina en pleno desarrollo

Por: Dra. Nury Simfors, Investigadora, Swedish National Defence College, Suecia, ***nusi0453@gmail.com***

Geología Médica o geomedicina estudia el impacto de los materiales y procesos geológicos en la salud humana y animal, es una disciplina dinámica en pleno desarrollo, la cual colabora estrechamente con el área de Geociencias, Biomedicina y Salud Pública.

Los elementos esenciales y tóxicos en las rocas y los suelos pueden convertirse en un riesgo directo para la salud de los seres humanos y los animales, su respectiva deficiencia o exceso pueden causar anomalías, deformaciones y hasta la muerte. Mientras algunos elementos como por ejemplo calcio, cloro, magnesio, fósforo, potasio, sodio y azufre son esenciales en cierta cantidad en el cuerpo humano, otros como el asbesto, cadmio, plomo, mercurio etc. pueden ser venenosos. Por ejemplo la deficiencia de selenio en el suelo se ha considerado la principal causa de anormalidades musculares y de miocardiopatía. Asimismo grandes exposiciones de arsénico es uno de los problemas más grandes en Geología Médica y afecta más de 100 millones de personas en Bangladesh, India, China, África, Europa, Norte y Sudamérica. En muchos lugares se puede encontrar grandes concentraciones de arsénico en forma natural en el agua subterránea pero también la combustión de carbón mineralizado ha causado envenenamiento debido a altas concentraciones de arsénico. La fluorosis dental y en el esqueleto también es un problema de salud que afecta millones de personas en el mundo y parecido al arsénico se puede encontrar en grandes concentraciones en el agua que tomamos y en menos concentración debido a la combustión de carbón. Otros problemas que la Geología Médica estudia es la ingestión de cal o arcilla, exposición a radón y la ingestión de altas concentraciones de compuestos orgánicos en el agua de beber. La Asociación Internacional de Geología Médica en colaboración con geólogos, geoquímicos y médicos ofrece cursos, seminarios y materiales didácticos a interesados en esta disciplina.

Más información sobre la Asociación se puede obtener en la siguiente dirección: http://www.medicalgeology.org/.

Lectura adicional

Bunell, J.E; Finkelman, R.B; Centeno, J.A y O Selinus (2007) Medical Geology: a globally emerging discipline. Geologica Acta, Vol.5, Nº 3, 2007, 273-281
Available online at www.geologica-acta.com

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Finkelman, R.B; Skinner, C.W; Plumlee, G.S. y J.E. Bunnell (2001) Medical Geology Geotimes
http://www.agiweb.org/geotimes/nov01/feature_medgeo.html

Geología Médica: una disciplina en pleno desarrollo

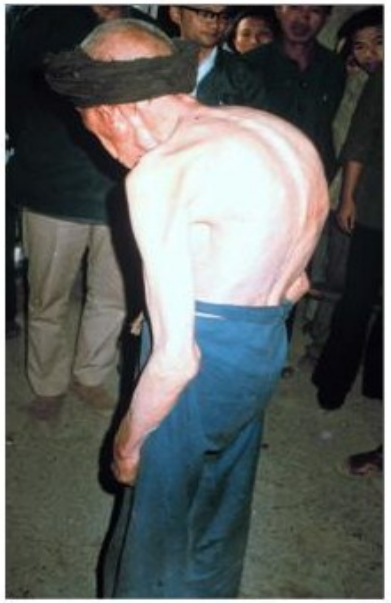

Foto 1: *mostrando problema de bocio debido a un aumento de la glándula tiroides. Foto publicada con permiso de la Asociación Internacional de Geología Médica..*

Foto 2: *mostrando severas anormalidades debido a deficiencia de selenio. Publicada con permiso de la Asociación Internacional de Geología Médica..*

Fotos 3 y 4: *mostrando problemas de fluorosis dental y del esqueleto en China. Publicadas con permiso de la Asociación Internacional de Geología Médica.*

5. Cursos y Eventos Importantes

Conferencias

Conferencia Internacional en Geotermia, 24-26 junio, Mainz, Alemania. Información: http://www.bestec-for-nature.com/j_bestec/tegr/

Conferencia Internacional en geomorfología, 27-31 agosto, Paris, Francia. IAG. Información: http://www.geomorphology-iag-paris2013.com/en/s9b-%E2%80%93-karstic-geomorphology-hydrological-functioning-palaeoenvironmental-reconstructions

Congreso Internacional en Sistemas de Flujo en regiones cársticas, Budapest, Hungria, 4-7 setiembre 2013. Información: http://www.karstflow2013.org/

Conferencia sobre geoetica y amenazas naturales: comunicación, educación y la interface entre ciencia-policy-práctica, 15-19 setiembre 2013, Torino, Italia. IAEG: Información: http://www.iaeg2014.com/programme/8/160-73-geoethics-and-natural-hazards-communication-education-and-the-science-policy-practice-interface

Conferencia sobre Nuevos Riesgos y Metas en la exploración científica, 23-25 setiembre 2013, Bremen, Alemania. IODP-Invest: Información: http://www.marum.de/INVEST_Conference.html

Conferencia Europea de Geoparks, 4-6 setiembre 2013, Cliento, Vallo Diano and Alburni National Park ▪ Geopark, sur de Italia. Información, UNESCO. Información: http://www.europeangeoparks.org/wp-content/uploads/2012/11/12thEGN_Conference_2013.pdf

Talleres y cursos internacionales

Taller sobre la Ciencia Espeleológica, 28 de julio al 2 agosto 2013, Heidelberg, Alemania, http://www.speleothem2013.uni-hd.de/program.html

Taller de Sensores Remotos en un ambiente geológico dinámico. 17-24 Agosto 2013, Islandia, Norvulk. Información: http://www2.norvol.hi.is/

Curso Internacional en Sismología y Amenaza Sísmica, 12- 6 de setiembre, Postdam, Alemania. GFZ. Información: http://www.gfzpotsdam.de/portal/gfz/Struktur/Departments/Department+2/sec21/InternationalTrainingCourses/Kurs2013

Taller de Paleosismología, Tectonica Activa y Arqueosismología, 9-14 octubre 2013, Aachen, Alemania. INQUA. Información: http://www.paleoseismology.org.

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Estamos en la página Web: ***www.goaldaad.com.ar***
Cualquier pregunta o comentario respecto al Boletín, por favor comuníquese con Dra. Nury Morales-Simfors, *nusi0453@gmail.com.*

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