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Rock detectives-Cooperation between Portuguese Geoparks-Geointerview with Artur Abreu e Sá and mote.

www.geoparknaturtejo.com



Olá/Hola/Ciao/Bonjour/Γειά σου/Hallo/God Dag/Salut/Zdravo/Hello

The fossil log is still missing! After so much divulgation of this disaster in all national media by the Geopark police authorities apparently have no clues to announce about the disappearance/stealing/selling of this important educational tool. Since April 2008, the fossil log was on the way to be protected as cultural heritage by the municipality of Vila Velha de Ródão, with the agreement of some heirs of the Ferro family, and, thus, was already under the law. Since 2004 and from the beginning of the geological inventorying Naturtejo try to convince local authorities for the dangers threatening some geosites and presented several times proposals for protection and conservation advising at the same time against the void in the law about property of paleontological and geological heritage. People can collect fossils, rocks and minerals everywhere they want in Portugal, except in protected areas, and do whatever they like with them, from selling to decorate gardens and house walls. And this is not the only problem. In all the country, old rocks from cultural heritage, such as rock basins for cattle, dry-stone walls, coat of arms rocks, rock tombs, statues etc, etc, are being selling without any control or stolen from farms and monuments. For the Geopark, any destruction or subtraction of paleontological or geological heritage, as well as historical/cultural heritage is the lost of evidences that build our History. They are precious tools that enable to imagine former times. In a time of fast consume of information, with so many distractions, an impressive fossil or a special statue are the only ways to feed the curiosity that lead to visit our territory or keep the senses of pupils focused at least for a few time. In the world dominated by TV words are loosing strength: story tellers such as our guides are doomed if they have no amazingly outstanding geosites neither new tools to interpret landscape in a captivating (visual) dynamic way. Besides conservation of our geomonuments as pristine sites out of the urban world we must introduce visual interpretation tools, such as virtual reality reconstitutions or interactive augmentedreality videogames, not only in impressive interpretation centers but in a way that can follow the visitor/student in his field visit. To protect we must know our heritage and understand its importance. As comparison may be achieved in global scale heritage uniqueness must be understood by a comprehensive research and presented with our most appealing efforts. Creating tools to learn with all senses but without forgetting that information nowadays is processed by us mainly at the speed of light are the best ways to increase awareness and care about our common heritage. No care means lost and destruction of ourselves.



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1) Activities



February - Cooperation between Portuguese Geoparks for the EGN Conference.

Naturtejo Geopark is preparing the 8th European Geoparks Conference giving the possibility to know three other Geoparks projects in Portugal. 2-4 days post-Conference excursions enable to discover the best of our geodiversity as well as several examples of Nature Tourism development. Discover a different Earth with us at the Conference's space in www.naturtejo.com.

(Photo sources: Geopark Naturtejo, Geopark Porto Santo, Geopark Arouca, Geopark Açores).

The first working meeting between Açores and Naturtejo geoparks will be held at Faial Island (Azores) next 30th March presided by the Regional Secretary of Environment and Sea of the Azores Government. The subject in discussion will be strategies and development models for implementing Açores Geopark.

February – Again Ensino Magazine...a national newspaper reference for education. Last month we presented Ensino Magazine after two years of partnership with Naturtejo Geopark. This newspaper celebrated 11 years old and became the main reference in Portugal. With free distribution from the Primary School to Universities Ensino Magazine reaches a universe of 200000 readers. But not only in Portugal. Ensino Magazine born in Castelo Branco from the enthusiasm of RVJ editors to inform about teaching, culture and education also in Spain and the African Countries whose mother-language is Portuguese. Next step for Ensino Magazine is to be distributed at the Brazilian universities. The main aim of Ensino Magazine is to aware society about school activities as much as it serves students and teachers as tool to prepare school year. Trough Ensino Magazine Naturtejo Geopark reaches each month new publics that potentially will look for our educational programs. Geo-news presents all that Naturtejo Geopark

has to offer for teachers and students. João Carrega and the Ensino Magazine must be congratulated for divulgation of our territory to the world.

7-15th February – **Naturtejo Geopark in Nauticampo National Fair.** Nauticampo is the most important national fair for nature sports and leisure. Naturtejo Geopark was in Lisbon representing for the first time the Tourist Brand Castelo Branco-Naturtejo. Ana Rita was the host of the promotional stand.



10th February – "**Discover your Geopark**" **bring kids to the "Fossils Park**". 40 6- to-7 years old kids from Idanha-a-Nova Primary School were introduced by Manuela Catana and the geologist João Geraldes to the wonderful world of Penha Garcia (trace) fossils in the scope of the annual educational project "Discover Geopark's geomonuments in your municipality".

11-15th February – "**Rock Crystals**" **prospect our Geopark.** Two delegates of the Spanish outdoor company "Cristal de Roca" got the opportunity to test the quality of Naturtejo's programmes and trails. During these days they actively visited the Schist Village of Foz do Cobrão and the Secrets of the Almourão Valley trail, did the boat trip to Portas de Ródão Natural Monument, admired Fragas de Água d'Alta waterfall and Mosqueiro viewpoint at Orvalho, and walked on the Fossils, Boulders and Vultures trails.



12th February – "**Discover your Geopark**" **bring kids to the giant boulders of Monsanto.** 35 young pupils from the Ladoeiro and S. Miguel d'Acha small villages from Idanha-a-Nova municipality surely animated the rocks at the island that is a mountain, at Monsanto. Manuela Catana and João Geraldes guided the group into the land of Geology.



14th February – **Trilobite.aventura celebrates the first year of adventures.** Fragua Bar was full of friends and sympathizers for the birthday party of the successful company Trilobite.aventura. One year of adventures in Penha Garcia Ichnological Park and all over Portugal bringing adrenaline and happiness to many of those that simply do not want to stress at home, in the city cold and grey, alone. Armindo Jacinto, Carlos Neto de Carvalho and Joana Rodrigues could not miss the best of events that Trilobite.aventura developed after its birth in the cliffs of Penha Garcia and now presented as slideshow to their friends. Trilobite.aventura had its own cake with just one candle and it was very funny to sing altogether the birthday song for Trilobite.



16th February – "Discover your Geopark" bring kids to the Natural Park. More pupils from small villages of Idanha-a-Nova municipality discover their geomonuments, this time within Tejo Internacional Natural Park. Salvaterra do Extremo gorge were studied by 20 pupils from Zebreira village with the help of our guides Manuela Catana and João Geraldes, the geologist in service.



19-20th February – **More pupils day and day coming to the Geopark.** Such beautiful sunny days smelling Springtime attract so many pupils to the Geopark. During 2 days 113 pupils and 9 teachers from the Jácome Ratton high school, Tomar, participated in the educational program "At the Fossils Trail from Penha Garcia: searching for the remains of Trilobites" Once more, our expert in kids and the geologist training to become a proud father (this time João Geraldes came to work with his wife and future mother) were the guides. During the picnic lunch participants were amazed by the Ponsul gorge views "into de Ordovician Sea".



20th February – **A look into Geology and Archeology of Oleiros.** Associação de Estudos do Alto Tejo organized one more workshop where symbiosis between Man & Nature was searched this time in the beautiful landscape of Oleiros. Archeologists and Geologists (not so) working in the area presented their results and thoughts to a crowded and interested audience. Armindo Jacinto was invited to open the event again wonderfully hosted by Oleiros municipality. During the afternoon there was time to visit the new excavations in a Neolithic mountain *tumulus*.



25th February – **Rock Detectives in a full-day off the routine.** Carnival holidays for children but not for their parents who didn't knew where to leave them. So Naturtejo Geopark and Associação de Estudos do Alto Tejo would have to do something. Why not a full day searching for rocks in the Tejo valley? 21 small detectives, between 9 and 14 years old and coming from several towns, joined to Carlos Neto de Carvalho, Joana Rodrigues and Manuela Catana to give a look to Portas do Ródão Natural Monument. Convince them to interpret it by drawing was a little bit more difficult but still Andre gave us the cover of *Cruziana* for this month. After an introductory talk about geologists and geology, minerals and rocks it was time to see them all at different scales. A visit to the Archeology Museum of Vila Velha de Ródão introduced the notion of Time. A short walk during the very pleasant afternoon brought them from fossils with more than 470 milion years old to the Man's legacy at Vilas Ruivas. The noisy group reached Fonte das Virtudes island to take the boat right to the best sunset you may enjoy at the Naturtejo Geopark, flanked by the gigantic mountain gates of Portas de Ródão.



26th February – ...**and more schools...** 56 noisy and happy pupils from the 7th, 10th and 11th grades of the EB 2,3/S Octávio Duarte Ferreira middle-high school, Tramagal visited the Ichnological Park of Penha Garcia with their 4 teachers. Once again the dynamic duo were the monitors for this educational program in the scope of the Natural Sciences and Geology/Biology disciplines. Lunch time was right in the Ponsul gorge surrounded by *Cruziana* and quartzite vertical beds, close to the romantic watermills.



27th February – ...and more schools: Manuela Catana and João Geraldes must be congratulated for the success! They never stop to come: this time 38 pupils and 4 teachers from the EB 2,3 Dr. Bissaya Barreto Middle School, Castanheira de Pêra, visited the Ichnological Park plus Monsanto inselberg. The educational program occurred in the scope of Natural Sciences and History disciplines. Guess who were the brave monitors...?



27th February to 1st March – **Naturtejo in the Ornithology International Fair, Spain.** Birdwatching is an ever growing tourist product at Naturtejo Geopark. Programmes for birdwatching were prepared for the greatest enthusiasts of vultures and passerines. Promotion of our feather fellows occurred during the International Ornithology Fair at Monfragüe National Park (Spain), close to the Geopark. Pedro Martins and Armindo Jacinto were there presenting the territory to specialized tour operators and general public. Find the differences with our kids...





GEOINTERVIEW

Researcher on Lower Paleozoic Stratigraphy and Paleontology and Professor at the University of Trás-os-Montes e Alto Douro (Vila Real, Portugal), Artur Sá is author of several books and papers about Paleontology, Stratigraphy and Geoheritage. Sá is the scientific coordinator of the Geopark Arouca, which is expecting to become the new Portuguese member of EGN/GGN.



Cruziana: How did the idea of the Geopark Arouca occurred to you?

Artur Sá: The idea began during the building of the Geological Interpretative Centre of Canelas (Arouca). The knowledge about the regional geology acquired during my paleontological works revealed the existence of a firstclass Geoheritage. So, after the protection and public promotion dissemination and of the outstanding fossils of the Canelas quarry, housed in a new on-site museum, I was urged to do something more, in a holistic approach, for the Arouca region. The existence of an important and diversified natural and cultural heritage in this territory supported the idea for the creation of a Geopark and, by this way, promoting a sustainable development for the entire area.

Cruziana: Which are the main geodiversity features of Geopark Arouca?

Artur Sá: As wrote Richard Fortey in the 2008 issue December of the Geoscientist journal, the Arouca Geopark could be defined as the "Geopark of the giant trilobites". However we have already identified, characterized and evaluated 40 others geosites in the territory. Among them, I can put in evidence the "rocks delivering stones", a biotite nodular granite that, as far as we known, is unique in the world; the Mizarela waterfall, with its 70 m far above the ground is the highest in Portugal mainland; the roman gold mine of Canelas; the abandoned wolfram mines of Regoufe and Rio de Frades,



that were exploited by British and Germans, respectively,

during the World War II, and preserves the history of the black gold" or "wolfram fever" times: the ichnofossils of the Santa Justa Formation (Floian – Lower Ordovician), with a very impressive amount of Cruziana issp. panels that crops out in the Paiva Valley; the granite morphology, with its characteristic Castle Kopies, anammas. spheroidal and polygonal disjunction; or the several viewpoints that allow us to enjoy landscapes to lose one's breath.



"Rocks Delivering Stones"

Cruziana: During the last few years Arouca has appeared as a Nature Tourism destination. What new products do Geopark Arouca has to offer?

Artur Sá: The tourist potential of Arouca was known a long time ago, mainly related with and its natural rural environment, in the periphery of the Oporto Metropolitan Area. The historical reconstitutions and processions, related with the Arouca's Cister Monastery traditions, the gastronomy and conventual sweetmeat, and more recently the adventure sports, mainly related with the Paiva River wild waters

(rafting, canyoning, canoeing, hydrospeed, etc.), become a visiting-card of the region. In spite of all that, the Arouca Geopark management structure the Arouca Geopark Association (AGA) has been promoting and spreading actively the region at tourism fairs and through Educational the new Programs and Tourist Routes. These last ones were articulated with all the "actors" in the field related with the tourism (hotels, restaurants, and tourism and adventure enterprises) and are already a very promising product to improve the tourism in the territory.

Cruziana: What was the impact of the Geoconservation prize 2008 awarded by ProGEO-Portugal for local communities?

Artur Sá: The impact of this award in the national and regional media gave us the first great public recognition of our efforts. In fact, after the diffusion of the news, local entrepreneurs start to demand us more information about the nature and goals of the Geopark as a structure that wants to contribute fundamentally for a regional sustainable development. At the same time this project became consensual for people of all shades of opinion.

Cruziana: How do you think a National Geoparks Network would be helpful?

Artur Sá: The hypothetical creation of a Portuguese Geoparks Network in the near future could help us to define join strategies, in consonance with our social and economic realities. However, it's my solid opinion that this should be articulated in a strict way and under the auspices of the National Commission of UNESCO.

Cruziana: Which were the greater difficulties concerning the European Geoparks Network rules?

Artur Sá: The major difficulty was to create and put into operation the management structure.

> "Giant Trilobite" (Photo: Geopark Arouca)

Cruziana: Canelas trilobites are nowadays the ex-libris of Arouca region. What will be the new bets for geotourism?

Artur Sá: Beyond the giant trilobites (and all the other Middle Ordovician fossils associated...), in the Arouca Geopark we have two others geological occurrences with international relevance: the "rocks delivering stones" and the ichnofossils of the Paiva Valley. In this moment we have already finished the projects that will let to preserve and put into value this outstanding heritage. allowing the access and clear explanations to the public. However, we will implement until the end of 2011 the general signaling the of

geosites, in a global project 350.000.00 Euros with of estimated budget. Only that way we are able to receive all the people in good conditions and to implement efficaciously our geological routes. Our action will be extended to the namelv adventure sports. through trekking, mountain bike and rafting boats guides, which will receive specific formation respecting to the geological heritage in the neighborhood of the different trails.

Cruziana: Which are the fragilities of the Geopark project?

Artur Sá: Every project has strengths and weaknesses, and of course this project isn't different. In this moment I think that our Achilles' heel is the newness and the youthfulness of the Arouca Geopark. In fact all the AGAs' team is making a big effort to transmit the Geoparks philosophy to all the people, starting from the schools. In this sense we are promoting wideranging activities in the territory in order that local people be able to fully understand our objectives.

Cruziana: As Arouca, Geopark Naturtejo has a diverse Ordovician heritage that is currently using to promote its territory. Will be possible, in the near future, to develop common strategies for these places?

Artur Sá: As Corresponding Member for Portugal of the International Subcommission on Ordovician Stratigraphy (ISOS-IUGS) this question is "music to my ears". In fact we have an outstanding Ordovician heritage in both territories! In my opinion they are complementary, because Naturtejo has beautiful and very famous Cruziana issp. ichnofossils, and at Arouca we can see the trilobites, probably the responsible for the cited ichnofossils. So, we are condemned, in the good develop future sense. to common strategies, based on our great Ordovician paleontological record. It is important to say that in some recent scientific publications about the geology and the geological heritage of the Arouca Geopark we have already made references to Naturtejo Geoheritage.

Cruziana: What is the role of a Geopark towards the scientific illiteracy?

Artur Sá: I must say that Geopark will have a key-role in this "fight" against scientific illiteracy. In fact, it is time for a paradigm change and therefore for bet strongly on the promotion and spread of the geologic knowledge. As José Brilha said in the last Cruziana interview "The society needs to be aware that geodiversity elements are needed to maintain our way of life", in my opinion Geoparks will be able to contribute to this purpose face to their straight intervention in the territories and great proximity and cooperation with the local population.





Cruziana: Is it possible to do geoconservation in Regoufe and Rio de Frades abandoned mines?

Artur Sá: Of course!! The municipality of Arouca bought already the Rio de Frades mine and AGA is by now preparing an ambitious project that will transform this old mine in a thematic centre of science, related with the mining activity. Concerning Regoufe, we have some ideas under study and we hope to have good news in a near future. Nevertheless, we must not forget the importance of these two wolfram mines to the economy and society of this region during the times ranging 1920 to 1960, mainly during the World War II. In this sense we are preparing a special tourist program to promote this reality in England and Germany. In fact. the Oporto International Airport, just 70 km far from Arouca Geopark, is an important platform for several low cost airlines, which links Oporto to several cities from these two countries.

Cruziana: How is it possible to manage a quarry and extracting trilobites in a Geopark?

Artur Sá: It's easy when the scientific coordinator of the Geopark is the scientific responsible for the Geological Interpretative Centre of Canelas. At the same time we must remember that Manuel Valério, owner of the quarry, was himself who demanded help to Portuguese universities for studying and preserve this geological heritage. Till now his attitudes gives to the scientific team that

gives to the scientific team that works in the quarry all the guarantees about the preservation of this heritage, according the UNESCO guidelines. We already have a public statement signed by Manuel Valério about his promise of never selling fossils. As we already said in several international conferences, this is a new paradigm of cooperation between industry and science. Cruziana: What advices would you leave for the Naturtejo Geopark and European Geoparks Network?

Artur Sá: Work closely with us to improve more and more the EGN/GGN.

3) Geopark's Impact in Media

Mewspapers/Magazines

February (Ensino Magazine) - Geo-news "The secrets of the Almourão Valley"

February (Viajar Magazine) – "Naturtejo Geopark presented Territories for Innovation in Fitur"

February (O Concelho de Vila Velha de Ródão)– "Stolen Fossil log with five million years old"

February (O Concelho de Vila Velha de Ródão)– AEAT – Workshop of Geology "Rock Detectives"

3th February – (Povo da Beira) – "Naturtejo Geopark presents tourist and educational programmes"

5th February (Reconquista) - "Geopark shows itself at Madrid"

5th February (Reconquista) - "Wider horizons with the Ecotour project"

10th February – (Povo da Beira) – "Naturtejo Geopark presents Territories for Innovation in Fitur"

10th February (IOL Diário online) - "Stolen trunk with five million years old"

10th February (Portal de Nisa online) - "Fossil log from Monte da Coutada was stolen"

10th February (Oje - o Jornal Económico) - "Fossil log with more than five million years old disappeared from Naturtejo Geopark"

10th February (Literatura pnet) - "Vila Velha de Ródão: Fossil log with more than five million years old disappeared from Geopark"

10th February (Notícias.Sapo.pt) - "Fossil log with more than five million years old disappeared from Naturtejo Geopark"

10th February (Jornal do Fundão online) - "Fossil log with more than five million years old disappeared from Naturtejo Geopark"

11th February (O Público) - "Fossil stolen from Naturtejo Geopark"

11th February (Diário de Notícias) - "Stolen trunk with five million years old"

11th February (Correio da Manhã) - "A fossil was stolen"

11th February (Gazeta do Interior) - "Fossil log from Monte da Coutada was stolen"

11th February (Gazeta do Interior) - "Science-Caffe talks about Darwin and the Evolution of Species"

11th February (Gazeta do Interior) - "Trilobite company animates nature"

11th February (Gazeta do Interior) - "Naturtejo presents Territories for Innovation"

11th February (Expresso do Pinhal) - "Fossil log from Monte da Coutada was stolen"

11th February – (Povo da Beira) – "Fossil log from Monte da Coutada was stolen"

12th February –(Raiano) – "Naturtejo Geopark presents tourist and educational programmes in BTL"

12th February –(Raiano) – "University promotes a paleontological adventure"

12th February –(Raiano's first page) – "Naturtejo Geopark presents Territories for Innovation in Fitur"

12th February (Pinhal Digital) - "Fossil log from Monte da Coutada was stolen"

12th February (Jornal do Fundão) - "Fossil log stolen"

12th February (Reconquista) - "A look into Geology"

12th February (Reconquista) - "Coutada's fossil was stolen"

12th February – (Reconquista) – "Açafa Trails 2009"

12th February –(Reconquista) –"Diving flight from 4 thousand meters high" 14th February (Fonte Nova) - "Naturtejo and ICT-VR"

17th February (Povo da Beira) - "Archeology and Geology emphasized at Oleiros"

17th February (Povo da Beira) - "Fossil log from Monte da Coutada was stolen"

18th February (Gazeta do Interior) - "Archeology and Geology emphasized at Oleiros"

18th February (Gazeta do Interior) - "III Environmental photography contest"

19th February (Reconquista) - "Stones' debate at the Culture House"

25th February – (Gazeta do Interior) – "Workshop introducing Geology to young people"

25th February– (Gazeta do Interior) – "Specialists met in Oleiros"

25th February – (Reconquista) – "Debating Heritage"

26th February - (Jornal do Fundão) - "Archeology and Geology discussed"

Radio

10th February (Rádio Clube de Monsanto) - "Fossil log with five million years old was stolen from Monte da Coutada, Vila Velha de Ródão"

11th February (Rádio Cova da Beira) - "Fossil log disappeared"

11th February (Rádio Condestável) - "Vila Velha de Ródão - Geomonument was stolen"

11th February (Rádio Antena 1 national radio) - Carlos Neto de Carvalho is interviewed about the disappearance and heritage importance of the fossil log

ΤV

3rd February (Primeiro Jornal - SIC national private TV) - Armindo Jacinto and Carlos Neto de Carvalho were interviewed during the presentation of the Geopark "Naturtejo has marine fossils with 480 million years old".

3rd February (Nós por Cá - SIC national private TV) - Sr. Domingos, the guardian, is interviewed about the Ichnological Park of Penha Garcia

6th February (Nós por Cá - SIC national private TV) - Studio interview with Carlos Neto de Carvalho about news and the work of a geologist

13th February (RTP national TV) - Armindo Jacinto and Carlos Neto de Carvalho were interviewed about the heritage importance of the fossil log stolen at the Naturtejo Geopark.





1st Circular in pdf available online; online registration in the beginning of March! Be prepared for something completely different!!!