



# CRUZIANA

GEOPARK NATURTEJO DA MESETA MERIDIONAL-EUROPEAN AND GLOBAL GEOPARK - MONTHLY REPORT

**Neste número:** - I Conference GEOschools: new approaches for teaching Geosciences – Geopark coordinators with books on Tourism and Rural Development – New educational programmes get involved more organizations – Discover of a new fossil in Italy by Naturtejo Geopark team ...and more!



**Olá/Hola/Ciao/Bonjour/Γειά σου/Hallo/God Dag/Salut/Zdravo/Hello/Ahoj/Helo/Helló/ Hei**

Geotourism, a new concept and sustainable tourism niche with worldwide exponential growth in the last decade is after all as ancient as the pilgrimage to sacred landscapes, rocks, caves, minerals or fossils by Man. Geotourism may be defined as the sustainable organization of tourism resources, i.e its protection, conservation and valorization, offer of goods and services, divulgation and promotion (communication) of the destination, that is established for the geological heritage. Nowadays geotourist destinations are multiplying all over the world, from the Grand Canyon and the National Park of Yellowstone, in USA, to Geysir and the volcanoes of Iceland, to Roroimö (Mount Roraima), between Venezuela and Brazil, and Uluru (Ayers Rock) in Australia. Geotourism, as segment of Nature Tourism, with direct and indirect connections with the Cultural Tourism (landscape touring, mining parks, museums and interpretive centers), with Active Tourism (trekking, speleotourism, ...) and even with Health and Well-Being Tourism (thermalism), evolved fastly with the expansion of the global geoparks movement starting from 2000. In fact, the scientific analysis of Geotourism is still very recent, with the first Geotourism Global Conference occurred in 2008, in Austrália. In this case, Portugal keeps in the forefront as result of the strong enthusiasm develop around the concept of geoparks, in the last six years. The 8th European Geoparks Conference was organized by Naturtejo Geopark in 2009 and was the first international scientific event in Portugal dedicated to Geotourism. The first book about the subject ever published in Portugal, "Geotourism and Local Development", came in the same year. In 2010, the I International Conference on Geoheritage and Geotourism was organized by the Portuguese Association of Geotourism and by the Institute of Geography and Land Management. This month Arouca Geopark organized the International Congress of Geotourism – Arouca 2011.

Despite the word Geotourism has started to have a more generalized use after the end of the nineties, its background came from the seventeenth century. In Portugal, the history of Geotourism is deeply rooted in magic-religious traditions related with a "popular" Christian religion with millennia. In the present stage of scientific emplacement of this new tourism segment it is fundamental to draw Geotourism background in the frame of the development of tourism in Portugal, mostly in the last 100 years, in this year celebrating the Centenary of Tourism in Portugal.

# ACTIVITIES OF THE MONTH



## **29th October to 1st November – Oleiros Geosweets highlighted in the V Show of the Strawberry Tree and Chestnut.**

The local agency for development Pinhal Maior associated with the Municipality of Oleiros in the organization of the V Show of the Strawberry Tree and Chestnut, at Oleiros. The importance of this Show for the rural area of Oleiros, promoting activities that bring value to local resources and natural and cultural heritage, rising competitiveness, has the sponsorship of the subprogram 3 from ProDeR. Following a strategy to develop new tourism attractions, and reversing the seasonality of tourism in the area, this initiative reveals the importance for fostering the social and economic development by providing sustainable multifunctionality for resources. Due to the high demand for local quality products, namely dairy products and handicraft, the latest edition officially launched the Show of Local Products. Many farmers/handcrafters were represented with their corn bread, cookies, cheese, linen, manufactured shoes, schist houses, honey, jam, the cork seats, sweets, chestnuts, strawberry tree brandy, strawberry trees, chestnut trees, casters and Geosweets. The quality and diversity of the products in this Show, and the care of the farmers, are representative of Oleiros as alive and dynamic region. In the year of the consecration of the Show of the Strawberry Tree and the Chestnut, a successful example that came to remain, the fifth edition joins to the celebration of the International Year of the Forests, in an excellent opportunity to argue for the unequivocally importance of this richness. In this way, the focus for this year was the Multiple Use of the Forest.

**November – Launching of Naturtejo Geopark ID by UNESCO.** In the website [www.unesco.org](http://www.unesco.org) it is now possible to find a short introduction to Naturtejo Geopark. This UNESCO initiative aims to highlight the 87 geoparks actually existing all over the world.



**2nd to 4th November – Meeting of the partners from the European Project GEOschools.** The second annual meeting of the partners from the project Comenius – GEOschools was at the Naturtejo Geopark, in the School of Management of Idanha-a-Nova. Georgia Fermeli and Michael Dermitzakis from the University of Athens, Anastasia Koutsouveli, from the Committee of Didactics in Geosciences from the Geological Survey of Greece, Guillermo Meléndez, from the Department of Earth Sciences of the University of Zaragoza, Amélia Calonge, from the University of Alcalá, Carolina Di Patti and Carolina d'Arpa, from the Department of Geology and Geodesy of the University of Palermo and Geological Museum Gaetano Giorgio Gemmellaro and Fritz Steininger, from Krahuletz-Museum met with Carlos Neto de Carvalho, Joana Rodrigues and Manuela Catana to make the evaluation of the first year's project, and to prepare the second working year. The new webpage of the project is already available in [www.geoschools.geol.uoa.gr](http://www.geoschools.geol.uoa.gr). The European partners got the opportunity to make a short visit to the Naturtejo Geopark by some of the geomonuments that will be used in the development of pedagogical tools for the project. After a long visit to the Archaeological Museum of Ródão, where Carlos Neto de Carvalho introduced the geology and evolution of the landscape in Naturtejo Geopark, partners were delighted by the boat trip across the Natural Monument of Portas de Ródão. With an excellent lunch in the restaurant Vale Mourão and a short guided visit to the viewpoint of Portas de Almourão, the group went to Monsanto where, despite the storm they made a short tour by the granite inselberg granítico just before the night fall. Following the spirit of sharing and experience among European cultures and citizens, the Management School invited the partners of the GEOschools Project to participate in the reception to the ERASMUS students, for a medieval dinner where party was guaranteed by the happiness of everyone.

CORRADO VENTURINI - ANDREA BAUCON

# QUANDO PRAMOLLO STAVA ALL'EQUATORE

UN RACCONTO DI 300 MILIONI DI ANNI FA



COMUNE DI PONTEBBA  
Provincia di Udine



## **4th November – Finding of a new fossil in Italy by the team of Naturtejo Geopark was made public.**

The new ichnogenus *Pramollichnus* was introduced in its hometown Pontebba, NE Italy, in public conference. Corrado Venturini, geologist expert in the stratigraphy from the Carnian Alps, with an extensive work of research and raising awareness, and Andrea Baucon, paleontologist in collaboration with Naturtejo Geopark, and presently developing his Doctorate on computational models applied to Ichnology, presented the scientific importance and tourist potentiality in the region of Pramollo-Lanza to local politicians and general public. “Quando Pramollo Stava all'Equatore” (When Pramollo was in Equator) was the title of this travel to the past. Rivers and channels crossed a deltaic area covered by an exuberant forest where, in shallow waters, organisms and alga flourished. The mouth of the Amazon reminds the landscape offered by Pramollo 300 million years ago, during Carboniferous. Reminiscences of this equatorial landscape can be found nowadays, in the rocks from the summit of these mountains.

Pramollo is an open door towards the remote past of Friuli. A time-space gate that may be crossed in a simple trekking to discover the extraordinary geological heritage of Auernig, Carnizza and Corona summits, which are remarkable to the eyes of the geologists and everyone coming from many parts of the world. Two Friuli geologists, with a deep knowledge of the region, conducted the participants through outstanding images, clear reconstitutions and solid evidences. They showed the significance of the testimonies of a distant past, the importance of searching for past life preserved in the rocks and the understanding of climate changes from Carboniferous from the present times. In this recent period where the application of Austrian side of Carnian Alps is in discussion by the European Geoparks Network and the region of Pramollo gets the approval of a tourism development Project, it is of most importance to take the enormous natural (geological) appeal and, maybe, to develop a transborderland geopark, which Naturtejo Geopark supports enthusiastically.

Andrea Baucon introduced a unique fossil discovered in rocks aged from the Gzhelian E, and recently presented in the last International Congress of Ichnology, at Poland, in the Geotalia 2007 and described in the book “Italian Ichnology” edited by Marco Avanzini and Fabio Massimo Petti. Found in Carnizza mountains, *Pramollichnus* is rather common in the region of Pramollo. This peculiar testimony of biological activity is composed by crescent-displaced sets of burrows which start from two shafts, revealing a neurological reaction known as tigmotaxy. The similarity in shape with spheti inspired Andrea Baucon and Carlos Neto de Carvalho to give the name *Pramollichnus pastae* to these structures showing a foraging spatial organization patterned and efficient.



**5th and 6th November –Naturtejo Geopark hosts the I GEOschools Conference for teachers.**

Naturtejo Geopark organized the I GEOschools Conference: new approaches in Geosciences teaching, at the School of Management of Idanha-a-Nova, which was integrated in the 3-year European Project joining geoscientists from different universities, museums, geoparks and training schools for teachers, from Portugal, Spain, Italy, Greece and Austria. The aim of this project is to define models with principles for literacy in Geosciences for all the European citizens, which may be applied in the school curricula of the Secondary schools from the participating countries. Naturtejo Geopark is the Portuguese representative in this Project.

The GEOschools Conference got the support of Idanha-a-Nova municipality and the Politechnical Institute of Castelo Branco, and welcomed 160 participants coming from the whole country. 21 research works were presented as oral talks and posters, under the subjects: Geosciences curricula and textbooks; Teaching of Geosciences in the field; Teaching Geosciences for the sustainable development; Innovative strategies for teaching; Interest of students for Geosciences; Geosciences school lexicon.

Five practical workshops of pedagogical approach were developed. Professor Mário Cachão, from the Department of Geology of the University of Lisbon, gained an enormous success with the presentation of Rocha Amiga (Friendly Rock) pedagogical kits, an idea that is being already exported, and with which Naturtejo Geopark has been collaborating. The company Science4you introduced its Scientific Toys and experiment activities that are being sold in the whole country and are conquering international markets. The Living Science Center of Lousal captivated by the innovative approaches of the “Mine of Science”. The Living Science Center of the Forest from Proença-a-Nova, brought color and taste and a new way to make fossil replica that can be also used as soap. This and other pedagogical activities organized with Naturtejo Geopark, such as “Searching for gold” in the Ocreza river, where presented by the staff of both organizations. Also very interesting was the workshop of the National Museum of Natural History, about the method as contribute for geoliteracy.

Three key-note talks introduced the European research Project “GEOschools” and motivated the audience, the first made by Georgia Fermeli, from the University of Athens, specifically about the GEOschools Project aims, the following by Amélia Calonge, President of the Spanish Association for the Teaching of Earth Sciences, which was dedicated to the comparison analysis of European school curricula and the last one by Guillermo Meléndez, from the University of Zaragoza, on the building of a Lexicon accessible to young Earth Science students.

At the open hall the successful Show of Didactic Materials was made by Piaget Editora publisher, Science4You, Living Science Center of Forest, The House of Sciences of Gulbenkian, the Living Science Center of Lousal, the National Museum of Natural History and Naturtejo Geopark.

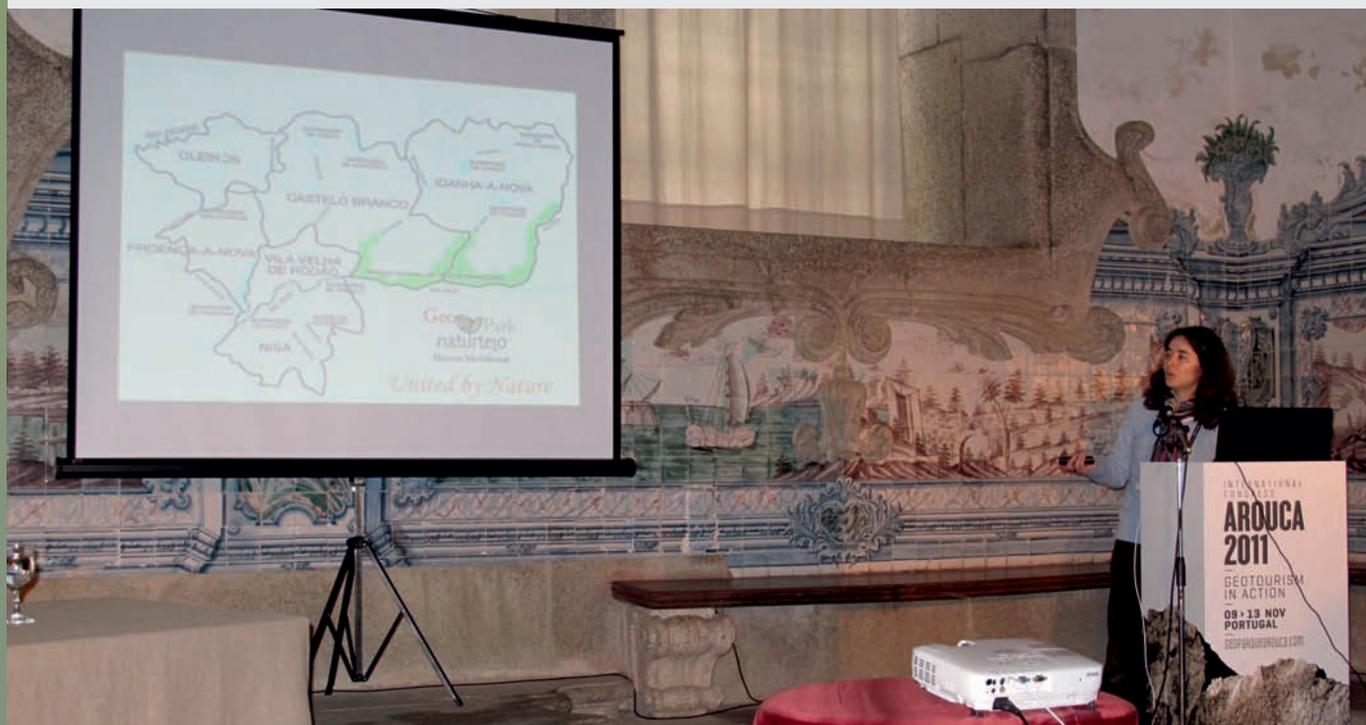
In the second day of the conference two field excursions divided the participants between “The Natural Monument of Portas de Ródão and the Fossil Logs of Vila Velha de Ródão” and the “The Ichnological Park of Penha Garcia and the Alpine legacy in the Borderland landscape”, which were guided by the geologists of Naturtejo Geopark. The field excursions chose stops with high potential for teaching geosciences, explorable by teachers and their students, most of them already included in the Educational Programs of Naturtejo Geopark.



**5th November – More institutions from the Geopark get involved with the new educational programmes for 2011/12.**

Naturtejo Geopark launched the new educational programmes 2011/12 during the I Conference GEOschools, at Idanha-a-Nova. The news for this schools year are the Educational Program “The Schools goes to the Geopark”: Field Trip I – “Wandering granite cut by the stonemasons from Alcains”, which involve the Stonemason Museum from Alcains and Manuel Martins, Lda local company exploiting the “White from Alcains”, a two-mica alkaline soft granite used during centuries for stonework. The field trip J – “Nature Conservation in the Tejo Internacional Nature Park: Monte Barata as example” involves the regional group of Quercus – Portuguese Association for protection o the environment. The field trip K – “Mining territories o the county of Idanha-a-Nova” is one of the activities developed for the Project and exhibition “When we went for ore”, which include pedagogical visits to mining areas with applications, the Workshop “From Gold to Goldsmith” and mining activities.

Any information and registration are available online in the website GEONATUR escola at [www.geonaturescola.com](http://www.geonaturescola.com).



### **9th to 13th November –Naturtejo Geopark in the International Congress Arouca 2011.**

The “International Congress of Geotourism” was hosted by Arouca Geopark with a strong support from Tourism of Porto and North of Portugal. Despite occurring in the same period of the 3rd Global Geotourism Conference, at the Sultanate of Omã, the invitation to Project partners, and Professional schools brought more than 100 participants to the Monastery of Arouca. The national participation was very strong, and also Brazilian researchers were quite active in this event. It is also worth to mention the impressive number of works and projects presented by the organization of this Congress, and for organizations and partner companies, which shows the expectation Arouca Geopark brought to the county since the integration in the European Geoparks Network. Nevertheless, considering Geopark networks few were the Geoparks represented. Naturtejo Geopark participated by Rafael André, Cristina Preguiça and Manuela Catana. The responsible for the educational programs introduced “The educational book Fossils Trail: questions and answers – a tool for educational and geotourism activities at the Naturtejo Geopark (Portugal)”, which was developed from her Master thesis in Geological Heritage and Geoconservation in 2008. This talk was included in the section “Geotourism, Education and Science”. Neda Torabi Farsani, researcher in the University of Aveiro, introduced a new book in co-authorship with economists, tourism experts and researchers from Naturtejo Geopark, that focus on the practical importance of geoparks for fostering the segment of geotourism, in the last decade. Rafael André, the responsible for the projects of Naturtejo Geopark gave his contribution during the plenary discussion where the major topic was the definition of Geotourism accepted by the Association of Travel Industry of USA and the National Geographic Magazine, and developed by Jonathan Tourtellot, founder and director of the Center for Sustainable Destinations of the National Geographic. “Geotourism in Action” resulted in the so called “Arouca Declaration”, which is based mostly on the definition of National Geographic and refers “Geological Tourism” as one of the many components of this already very confusing segment of tourism. Moreover, the “declaration” is a resume of the basic principles of interpretation of Freeman Tilden, coming from 1957, now applied to raising awareness to the geological heritage. It also stands the promise of a master in Geotourism in Portugal, declared to media by the organization, with a strong geological component in the curricula, like exists already in Poland since 1999 and following the trend of increasing offer of specializations in the tourism sector all over the world. In the next year, the subject Geotourism will come again to Portugal by the effort of Arouca Geopark with the I National Seminar on Geotourism, the European Conference of Geoparks and the I Congress of Geology of the Portuguese Speaking Countries.

**12 to 13th November – Fair of Spirits of S. Miguel d'Acha.** The 2nd Festival of Wines and Spirits was organized in the village of S. Miguel d'Acha, with the support of the Municipality of Idanha-a-Nova, Naturtejo Geopark and the Tourism of Centre Region. In this event, where the best wines and homemade spirits were prized, it was given special emphasis to local products. The seventre, a local delicacy, was showcased by the Seventre Brotherhood of S. Miguel d'Acha. Traditional roasted chestnuts brought a taste of mistelle and in the pubs wine was fluent. Local music brought rhythm to tasting for the numerous people that came to the village. Sunday morning a trekking dedicated to harvest and a bike tour devoted to spirits kept the idea in close contact with nature surrounding S. Miguel d'Acha. A group of 16 tourists took the weekend to make the Tour of the Historical Villages with Naturtejo, participating also in the Festival of Spirits with local rangers and tour guides from the Tourism Office from Idanha-a-Nova.



**21st November – Quinta das Palmeiras School in the Fossils Trail.** Naturtejo Geopark welcomed a group of 52 pupils of Quinta das Palmeiras high school, from Covilhã. To make the fossils trail in Penha Garcia, they were guided by Joana Rodrigues and Sara Canilho, according to the 10th grade Biology/Geology curriculum. The aim of this trip was to know more about the reconstitution of a shallow primitive sea environment and look for amazing, abundant and well preserved Cruziana trace fossils in the rocks of the Ichneological Park of Penha Garcia. The trip ended with great success with everybody really fascinated with this small area, but crowded of significant evidences of geological time in this territory of Penha Garcia.

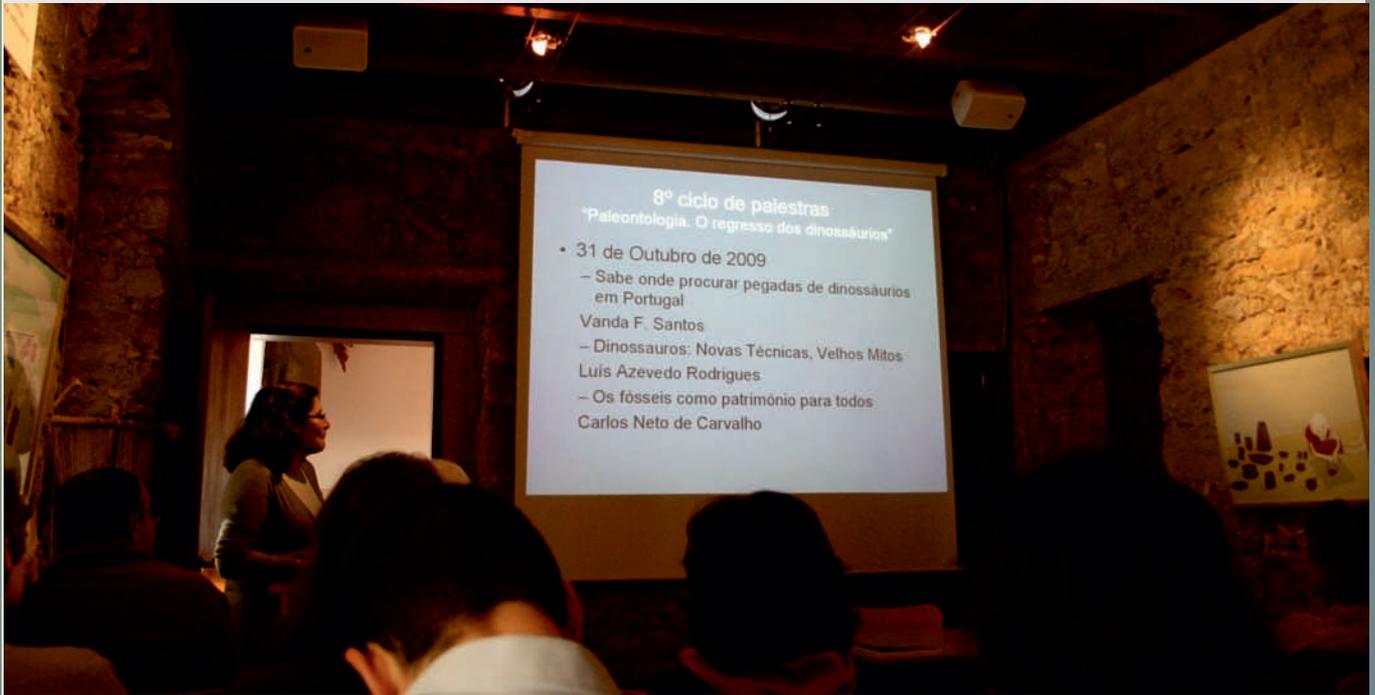


**22nd November – Naturtejo Geopark coordinators co-author books presenting alternatives for development of rural areas.**

The team of Naturtejo Geopark considers priority the communication of their work to justify methodologies and strategies implemented and as background for the fruitful exchange of experiences. Armindo Jacinto and Carlos Neto de Carvalho were involved in two books that deal with rural development and sustainable tourism. Portugal Rural – a Oportunidade (Rural Portugal – the Opportunity) is the book of the Soifer editores publisher coordinated by Jack Soifer, with contributions from Jorge Santos, Armindo Jacinto, Catarina Gonçalves and Sílvia Chambel, all experts in projects of sustainable development. Several examples shown in this book may prove that the countryside is the future because provides numerous opportunities for development and improvement of high-quality local products, by allying tradition to innovation. Armindo Jacinto wanted to demonstrate just that during the presentation of the book, to the numerous distinguished invited guests and media that accepted the challenge and came by train, from Lisbon to Castelo Branco, to look for the Rural Portugal. During the train trip the partnership of Naturtejo Geopark with two online commercial platforms of Portuguese products was presented, that will sell Geopark products in the main Portuguese tourism destinations: the Lusitanian Tradition and the Association of Hotel and Tourist Enterprises of Algarve. The Indian entrepreneur Dilip Kumar Dulobdas detailed his project for the building of a agro-industrial plant to produce alcohol from sorghum and grain and to use biomass to produce energy, an investment of 35,7 million Euros to begin in the first semester of 2012 which promise to reshape the rural landscape of the Idanha plain. A new gourmet product was also presented, the cheese chocolate, developed by the Cheese Cooperative of Beira Baixa DOP, from Idanha-a-Nova and the School of Hotel and Tourism of Estoril. Arriving to Idanha-a-Nova, the guests coming from several countries, from Japan to Israel Embassy in Portugal, started to visit the Cheese Cooperative and then they went to Ladoeiro, where they found the Growers Cooperative that is working in the design of quality and innovation for its olive oil “Lands of Idanha” and “Origin”. Here, the new Project Rural Enterprises Incubator was presented to support farming and the constitution of new local companies. Close to the end, the distinguished guests tasted famous local flavors in the company “Herbs of Zoé”, which produces and sells herbs and tea.

Geoparks and Geotourism: new approaches to sustainability for the 21st century is the most recent book of the Iranian researcher Neda Torabi Farsani published by the American BrownWalker Press, publisher specialized in technical and scientific books, with worldwide distribution. This book is the result of her Doctor thesis in Tourism Management of the University of Aveiro, with the professors Celeste Coelho and Carlos Costa. Carlos Neto de Carvalho and Joana Rodrigues, from Naturtejo Geopark, as well as experts on economy of the same university contributed to this book that emphasizes the importance of geoparks as innovative key-elements for socio-cultural, socio-environmental and socio-economic development of rural areas. This book, recently presented in Arouca during the International Congress of Geotourism, is an opportunity for diffusion of innovative examples developed by geoparks all over the world, being an excellent tool for understanding, and a starting point for new ideas, for students, professionals and decision makers. It is also a paradigm for organizations interested to develop new geoparks under the frame of the Global Geoparks Network.

**25 to 27th November – In the Historical Villages.** The Spanish tour operator Arawak prepared the program “A tour by the Geopark” with 34 people. Accompanied by a local tour guide the group visited the historical villages of Monsanto and Idanha-a-Velha, and also participated in a relaxing hydromassage session at Termas de Monfortinho.



**26th November – Presenting the book School Open to Heritage in the Museum of Archeology of Amadora.** The municipality of Amadora, through the Municipal Museum, presented the results of the Project School Open to the Heritage, which brought researchers to the Falagueira branch for an annual cycle of conferences. The book joins 25 researchers from Archeology, History, Ethnography and Paleontology, with subjects centered in this county from the surroundings of Lisbon. Carlos Neto de Carvalho was invited to introduce the subject “Fossils as Heritage for everyone” dealing with the sociological relations of Man with fossils in Portugal, across time.

**27th November – Mycological visit “Earth Smell II”.** The second thematic visit fully dedicated to mushrooms with the support of Naturtejo Geopark occurred in Penha Garcia and attracted dozens of people. It was organized by the Tourism Office of Idanha-a-Nova with the help of José Gravito Henriques, from the Regional Authority for Agriculture and Fishing of the Centre. 40 species of mushrooms were identified and the lunch was for tasting some of them, at the Termas de Monfortinho. The Spanish Tour operator Tierra Fuego took so delicious idea to bring 9 people to walk, during 3 days, by some of the best trails of Naturtejo Geopark. Thus, they visited: The Vultures Trail of Salvaterra do Extremo; the Gardunha Trail, between Louriçal do Campo and Casal da Serra; the sector of the GR12/E7, between Srª da Azenha sanctuary-Monsanto-Idanha-a-Velha; and the Fossils Trail of Penha Garcia.

**28 and 29th November – The Spanish Travel Agency Ruta Cultural discovers the Geopark.** The director of the Spanish travel agency Ruta Cultural came with Jesus Alarcon in a fam trip by Naturtejo Geopark. This two-day inspection was focused in the county of Idanha, where they visited hotels, restaurants and the thermal springs of Termas de Monfortinho. In Penha Garcia they look for the rural guest house TER of Santa Catarina and found the Ichnological Park of Penha Garcia, accompanied by Tiago Oliveira. In Idanha-a-Nova, they inspected the socio-cultural equipments, such as the Raiano Cultural Center and the Cultural Forum. They also visited the historical villages of Idanha-a-Velha and Monsanto with municipal tour guides.



# IMPACT OF GEOPARK IN MEDIA

## Newspapers & www

28th October (Jornal de Nisa) – Naturtejo Geopark awarded with merit by UNESCO.

31st October (Pinhal Digital) – Naturtejo Geopark study awarded in France

November (Revista Passear) – Orvalho Geo Trail

November (Oleiros Magazine) – Oleiros highlighted in Norway

November (Ensino Magazine) – Manchester studies the borderland

November (Ensino Magazine) – Living Science in summer

November (O Concelho de Vila Velha de Ródão) – GEOschools Conference bring teachers from all over the country to discover Ródão

2nd November (Gazeta do Interior) – Idanha held the GEOschools conference

2nd November (Gazeta do Interior) – Few viewpoints provide access to disabled people

3rd November (reconquista – front page) – Idanha is example for Europe

3rd November (reconquista) – Viewpoints study awarded

3rd November (reconquista) – A taste to wines and spirits

3rd November (reconquista) – Trail by Segura shows old mines

3rd November ([www.mmm-animarte.blogspot.com](http://www.mmm-animarte.blogspot.com)) – Naturtejo Geopark awarded in France

4th November (Il Gazzettino, Itália) – Pramollichnus discovered, a sensational living being

8th November ([www.abola.pt](http://www.abola.pt)) – Geology is the flag of the European tourism

8th November (Povo da Beira) – Wines & spirits attract tourists

8th November (Povo da Beira) – IPCB exhibits scientific posters from the VIII Iberian Congress of Geochemistry

9th November (Gazeta do Interior) – Segura hosts trekking and shows old mines

9th November (Gazeta do Interior) – Spirits recommended for the toast in the party

11th November ([www.casadasciencias.org](http://www.casadasciencias.org)) – Geoschools conference

16th November (Gazeta do Interior) – Visit to the rural environment with book presentation

17th November (reconquista – front page) – EDP cancels Alvito Dam

22nd November (Povo da Beira) – “Mountain Tour” map available at the Tourism Office

23rd November (Gazeta do Interior – front page) – EDP cancels Alvito Dam

23rd November (Gazeta do Interior) – Rural Portugal

23rd November (Gazeta do Interior) – And if inside a chocolate you may find cheese filling?

24th November (reconquista – front page) – 15 million to unite farmers and consumers

24th November (reconquista) – Presentation of the book Rural Portugal

24th November (reconquista) – Agriculture coming from Japan

24th November (reconquista) – Cereal energy

24th November ([www.diariodigitalcastelobranco.pt](http://www.diariodigitalcastelobranco.pt)) – Naturtejo join central purchasing

29th November (Povo da Beira) – Rural Tourism may be the lever for country's economy

29th November (Beira News) – Naturtejo Geopark promotes I GEOschools Conference

# SCIENTIFIC CONTRIBUTIONS FOR THE GEOPARK AND THE GEOSCIENCES



Farsani, N.T., Coelho, C., Costa, C. & Neto de Carvalho, C. – Geoparks & Geotourism – new approaches to sustainability for the 21st Century. Brown Walker Press, Florida, USA, 208 pp.

Soifer, J., Santos, J., Chambel, S., Palma, A.J. & Gonçalves, C. – Portugal Rural. Soifer Editor, 128 pp.

Farsani, N.T., Coelho, C., Costa, C. & Neto de Carvalho, C. – Geoparks and Geotourism: Concepts, Theories and Paradigms. In: Farsani, N.T., Coelho, C., Costa, C. & Neto de Carvalho, C., Geoparks & Geotourism – new approaches to sustainability for the 21st Century. Brown Walker Press, Florida, USA: 5-60.

Farsani, N.T., Coelho, C., Costa, C. & Rodrigues, J.C. – Sustainable Development Model in Geoparks. In: Farsani, N.T., Coelho, C., Costa, C. & Neto de Carvalho, C., Geoparks & Geotourism – new approaches to sustainability for the 21st Century. Brown Walker Press, Florida, USA: 61-102.

Farsani, N.T., Costa, C., Coelho, C., Neto de Carvalho, C. & Rodrigues, J.C. – Innovation in Geoparks. In: Farsani, N.T., Coelho, C., Costa, C. & Neto de Carvalho, C. Geoparks & Geotourism – new approaches to sustainability for the 21st Century. Brown Walker Press, Florida, USA: 103-136.

Dowling, R. K. – Geotourism's Global Growth. *Geoheritage*, 3: 1-13.

Neto de Carvalho, C. – Os fósseis como Património para todos. Escola aberta do Património. Câmara Municipal da Amadora/Museu Municipal de Arqueologia, 115-127.

Catana, M. M. - The educational book Fossils Trail: questions and answers – a tool for educational and geotourism activities at the Naturtejo Geopark (Portugal). In: Rocha D. & Sá A. (Coords.). Proceedings of the International Congress of Geotourism - AROUCA 2011. Arouca, Portugal, 41-44.

Sampaio, J. 2010 – Hidrogeologia. In: Notícia Explicativa das Folhas 25-C, Rosmaninhal, 25-D, Segura e 29-A, Retorta. Carta Geológica de Portugal à escala 1:50000. Unidade de Águas Subterrâneas, Laboratório Nacional de Energia e Geologia, 10 pp.

Fermeli, G., Meléndez, G., Dermitzakis, M., Steininger, F., Calonge, A., Neto de Carvalho, C., Rodrigues, J.C., Koutsouveli, A., D'Arpa, C. & Di Patti, C. – Projecto GEOschools. Conferência GEOescolas: Novas práticas no Ensino das Geociências, Livro de Resumos. Geopark Naturtejo - Idanha-a-Nova, 5 e 6 de Novembro de 2011, 6-7.

# SCIENTIFIC CONTRIBUTIONS FOR THE GEOPARK AND THE GEOSCIENCES



Catana, M. M., Neto de Carvalho, C. & Canilho, S. - A GEONATURRescola do Geopark Naturtejo: programas educativos em geociências e para a sustentabilidade. Conferência GEOescolas: Novas práticas no Ensino das Geociências, Livro de Resumos. Geopark Naturtejo - Idanha-a-Nova, 5 e 6 de Novembro de 2011, 30-31.

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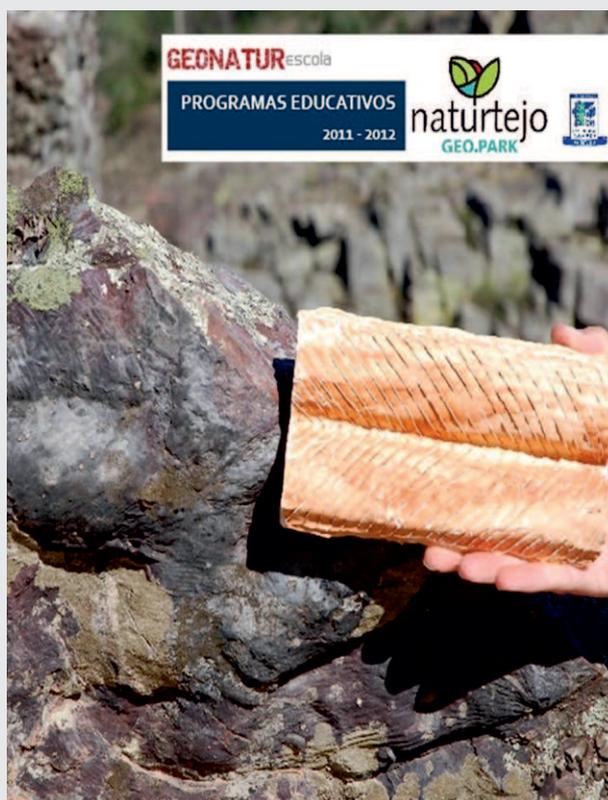
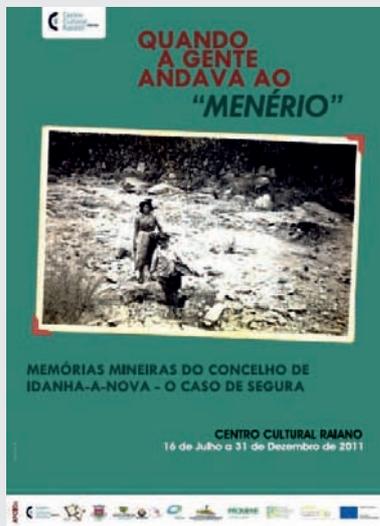
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