



### **In this issue::**

Gold Exhibition opened on the 10th anniversary of the Living Science Center of Forest Geopark in the House of Sciences International Meeting  
New partnership with UNESCO Funiushan Geopark  
World Forum for Rural Innovation rewards Geocompanies  
**...and more!**

# **CRUZIANA**

**GEOPARK NATURTEJO DA MESETA MERIDIONAL - UNESCO GLOBAL GEOPARK - E-MAGAZINE**



Organização das Nações Unidas para a Educação, Ciência e Cultura



Naturtejo da Meseta Meridional Geoparque Mundial da UNESCO



## **GEO-stories of our places and people: Idanha-a-Nova**

Idanha-a-Nova, graceful and pure leans over the great Ponsul Fault. It is 150m of a granitic vertical wall which separates the height of the Templar Castle from the small Ponsul gorge. Over and above it and after Rosa Cometa, Idanha's lea is vast, flat and fallen into the river. This is undoubtedly one of the best places in Portugal to "observe" the movement of a major active fault. Despite the recurrence period of the maximum earthquake is calculated in thousands of years, and never an earthquake with epicentre here has been felt, the Ponsul Fault is impressive in Idanha, carrying granites over muddy land in Senhora da Graça, a giant step in the border landscape, distinguishing the peneplain of the Alto Alentejo from Castelo Branco. Moreover, nests roosts among rock joints, vultures and raptors take cover and fulfil Idanha's skies.

The village mellows to this space, sunny between the small inselberg of S. Gens and ridges which shape into the abyss towering waterfalls, where the intense rain wets the ancient and fractured granites. The feeling we take from this landscape is archaic when we remember these Ordovician granodiorites have an estimated age of 490 million years.

The Templar Castle is in permanent vigilance, or what's left of it. Build in 1187, the Clock Tower and the terrace stand out, today a wonderful viewpoint over the lea and the sunny Idanha, with the 15th century Tower of Marqueses da Graciosa manor in the foreground, but with other examples of 19th century manor houses. Idanha, the new, overlapped in fact to a much older reality. The need to defend the border brought Templars to this Ponsul balcony, building the castle in the summit where people were living almost 1500 years before. In another emblematic summit, Monte do Trigo, a quartz pyramid erected above Ponsul Valley, another Late Bronze age fortified village limited by the physical space of the small residual ledge.

The ancient occupation of this vast region with 227,96km<sup>2</sup> transported in time sacred places that still today, subjected to the prevailing religious dimension, are worshipped by thousands and thousands of residents or those who still have this land running in their veins. Senhora do Almortão, with her 18th century Sanctuary in the centre of a sacred epicentre existing before the Reconquest, captivates by peace in an archaic landscape. This Heavenly Peace is only disturbed by the day dedicated to Her, filling the area with grilled aromas, street-seller announces, the sound of adufes (Moorish tambourines) the night people come to sing to the saint, and thousands devotes who come here with faith and promises, from everywhere and by all means. The rest of the year it is the 17th century Mother Church welcoming its believers, and there are still many around here. In Lent's cold sharp black nights, we hear singing to the souls in ritualized places, back to the Templar Castle and other locations which are almost always away from religion. The Pascal Mysteries in Idanha crystallize people's devotion and aspire to be internationally recognized by UNESCO.

In a rural territory seeking to be UNESCO, Idanha is the centre of a cultural movement around a new greener, organic, sustainable and may be more profitable agriculture.



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## Geo-histórias dos nossos lugares e gentes: Idanha-a-Nova

The idea is not new, as the dam Marechal Carmona construction in 1947 and the canals settled to irrigate more than 1550ha of good land revolutionised once the watermelon, tomato and tobacco crops, and the “Beira Baixa barn”. Back in those days agriculture was not supported by business opportunities and, with the exodus of the countryside in the 60's, revolution led to almost absence. In the Web Summit wave a Green Summit reaches Idanha, with young companies looking for an incubator for their creative ideas in a territory that offers opportunities. Idanha seeks to be this territory through its Program “Recomeçar” (Restart) aiming to provide a set of stimuli and conditions to establish the agribusiness “Green Valley”. Idanha-a-Nova is part of the UNESCO Creative Cities of Music network, which contributes to diverse events, conferences and seminars attracting different audiences throughout the year, with particular reference to “Feira Raiana”. As nerve axis, Raiano Cultural Centre and the Management Superior School are the places that host many of these initiatives and seek to give a scientific basis as well as more traditional and with strong ties to the land.

Throughout this strategy and in a UNESCO territory, where to fit in, and what advantages can the UNESCO classification bring? How can a Geopark contribute to a diversified development in its birthplace, Idanha-a-Nova? How can a Geopark contribute to the rapid loss of an ageing population, 2352 inhabitants in 2011 and today are less than two thousand? Naturtejo Geopark is a territory with only one edge allowing, thus, Idanha-a-Nova relates to a community of seven municipalities. Each of these municipalities has strengths that can complement to define a development strategy, common to the whole territory. Creating a tourist destination, Idanha-a-Nova has much more to offer with all the territory. However a diversification of tourism products and a joint promotion, despite the project Beira Baixa Lands of Excellency, is still missing in order to multiply the demand distributing it better in the territory. At the Green Valley lacks a reference in research and education for sustainability and climate changes that will hit the region, as well as agricultural practices and cultures present. A centre to develop dynamic models to value natural resources particularly soil and water. Idanha-a-Nova needs a Living Science Centre connected with the regional education, producing knowledge to spread by proximity and an advantageous gateway to the territory recognition.

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Cover: (Projecto Objectiva: Geopark)



# MONTHLY ACTIVITIES



**July – Holidays Academy "Explore and Learn" in Penamacor.** Naturtejo Geopark – UNESCO Global Geopark collaborated with recreational and pedagogical activities in the 1st Edition of "Explore and Learn Academy" in a project promoted by the municipality of Penamacor through the Office of Social Action and Education. The programme included several activities such as sports, educational, cultural, artistic, scientific and technological and ran during the school holidays, July and August, and was destined to young people aged between 6 to 16 years from all over the country. On the 6th July took place a field trip "Water and Life in the Bazágueda River", at the campsite of Freixial, Penamacor. The 16 participants observed and identified flora and fauna of the riparian ecosystem, as well as monitoring the water quality by identifying macroinvertebrates. On the 13th they attended a workshop "Mines and Minerals of Penamacor" and gold panning. In the morning, in a room in the Elementary School of Penamacor the 19 participants observed and identified minerals and had the chance to attend a presentation on the Mines in the Municipality of Penamacor, along with some games. In the afternoon, it was time to visit the geomonument Presa Roman Mines and collect some sediment. Next that sediment was washed in the Meimoa stream aiming to seek/find gold. The trainers were Mariana Vilas Boas and Manuela Catana supported by a technician from the Office of Social Action and Education of the municipality of Penamacor.



**10 to 12 July – House of Sciences International Meeting.**

**10 to 12 July – House of Sciences International Meeting.** The House of Sciences held for the 4th time the House of Sciences International Meeting, this time in the Faculty of Sciences of the University of Lisbon, gathering about 800 sciences teachers, mainly from Physics, Chemistry, Biology, Geology, Maths and IT, from basic education to high school level, involving university investigators and teachers. This is one of the largest events held in Portugal on education in scientific areas, to which Naturtejo Geopark associates since the first edition, participating in the organization, promoting the territory and educational activities, and showing some of the experiences, this year under the motto "Science Education and Economic Development". Joana Rodrigues presented the communication "Learn with Geocakes in Naturtejo Geopark, UNESCO World Geopark", in partnership with the Management School of the Polytechnic Institute of Castelo Branco and the Geocakes. In addition to plenary sessions, workshops, debates, oral communications, the exhibition "Magnificent Molecules", night astronomical observation and a play "Oxygen" performed by the Employees Group of Theatre of the University of Lisbon.

This meeting contributed significantly to enhance and improve the science teaching in schools and better preparing young people for their future needs.

Highlight to the recent integration of House of Sciences in EDULOG, the Education Think Tank from Belmiro de Azevedo Foundation, who works to get scientific data to support the decision in matters of education.



**10 to 12 July – Participation in the 2nd International Summer Course on Sustainable Tourism and the 0 Meeting of the International Project "I'm a Geoparker".** Mariana Vilas Boas represented Naturtejo Geopark – UNESCO Global Geopark in Guadalupe, Spain, for two important events. The 2nd International Summer Course on Sustainable Tourism and Heritage Interpretation, organized by Villuercas Ibores Jara Geopark - UNESCO Global Geopark. Besides this course she also attended the first meeting of the educational project "I am a Geoparker". Both events were attended by other Geoparks technicians, particularly the representatives of Haute-Provence (France), Parco Beigua (Italy), Sanqinshan (China), Hateg Country Dinosaurs (Romania) and Mixteca Alta (Mexico). The purpose of this project is to organize an international young club "Geoparkers: Earth's Story tellers". This project promotes network cooperation between global Geoparks as well as educational activities as an important working area in their territories.



**14 to 16 July - "Nature and Culture in Naturtejo Geopark", destined to American university students.** A group of 41 American students registered in the program "Study in Portugal Network" accompanied by 2 responsables from Luso-American Foundation to Development travelled for a 3 days visit to the municipality of Idanha-a-Nova, in Naturtejo Geopark to held a set of activities related to Natural and Historical-Cultural Heritage. These higher education students come from several universities in the United States of America and during the summer they study in various Portuguese Universities. On the 14th the group dinned in the restaurant "O Espanhol" and watch a performance by "Adufeiras do Rancho Etnográfico de Idanha-a-Nova" and experienced playing this traditional instrument. On the first day students attended a workshop on how to build an "adufe" in Forum Cultural of Idanha-a-Nova, performed by an artisan from Arts and Offices Centre. The group visited the Mills Complex in Proença-a-Velha accompanied by a tourism technician from the municipality of Idanha-a-Nova, and for lunch they had the famous codfish sunk in olive oil (Bacalhau à Lagareiro) and other delicacies produced and prepared by local cooks. In Penha Garcia they walked through the Fossils Trail, dived in the fresh waters of the dam of Pego and subsequently indulged in with regional products in the coffee/bar "Frágua". At the end of the day the group took part in the Watermelon Festival in Ladoeiro. On the morning of 16th, students visited the Granite Inselberg and the Historical Village of Monsanto, walking through the Boulders Trail, ending with a lunch at the Georestaurant "Petiscos e Granitos". The trainer for this activity which included visits to geomonuments was Manuela Catana.



**15 to 16 July - Watermelon Festival in Ladoeiro.** The Watermelon Festival in Ladoeiro is one of the most emblematic Summer Festivals in Naturtejo Geopark, and received thousands of visitors seeking for the best and fresher watermelons. Acha Doce Liqueurs attended with their geoliqueurs, with the refreshing liqueur sangria and a summer novelty, the caipirinha with tyme-lemon liqueur.

The program featured musical entertainment, live cooking, crafts, small taverns and several watermelon producers with the sweeter, fresh and tasty watermelon in the country. Artisans and local producers presented their latest products inspired by this summer fruit. For this edition, Joana Rodrigues chaired the jury of the watermelon sculpture contest, where several participants showed their technique, skills, patience and a creativity to execute sculptures that let your mouth water. Once again, dozens of tons of watermelon were transacted during the Festival, contributing decisively to the local economy.



**18 de Julho - Nova parceria com o Geoparque Mundial da UNESCO de Funiushan, na China.** Nanyang city witnessed the signature of the cooperation protocol between UNESCO Global Geoparks of Funiushan (China) and Naturtejo (Portugal). Jun Li, director of the Funiushan Geopark received in his administrative headquarters Carlos Neto de Carvalho, Scientific Coordinator of Naturtejo Geopark for the Protocol signature. The agreement includes knowledge exchange and networking between the two Geoparks through technical visits and personnel exchange. The cooperation areas include planning and landscape management, education and public disclosure, nature conservation and geoconservation, as well as brand promotion. The first practical actions take place in 2018 through promotional cooperation on International Tourism Fair of Berlin and the institutional visit of Funiushan to Naturtejo Geopark.

**16 July to 13 August - International Archaeologist Camp in Proença-a-Nova.** The second researchers group, part of the 6th International Archaeological Camp in Proença-a-Nova (CAIPN) was working since the beginning of August and is composed by 18 young people from 17 different countries of Europe, Asia and America and 8 archaeologists, which reinforces the internationalization of this camp. The 1st phase of the investigation had very positive results, but according to the Project Director, João Caninas, "this second period has been very important in terms of camp's internationalization". For the first time, the International Archaeological Camp of Proença-a-Nova receives a diverse group where "the vast majority of participants are foreigners and not all are archaeology students, some study engineering, law, management, among others", but with common interest and moved by the archaeology and work field passion. The partnership between the Municipality and the Alto Tajo Studies Association joined the Portuguese Institute of Youth and Sport that allowed "jumping from the field to internationalization", resulting in the participation of more countries than in previous editions and "is a line to continue, it's not an essential goal to the investigation, but it is important for local development", adds João Caninas, while designing the investigation beyond borders. Coming from several parts of the world the opinion is unanimous: a unique experience not only at knowledge level, but also of team work and interpersonal relations, as it allowed "meeting people from different nationalities and cultures, which is an enriching experience", said Fernando Torres, Mexican engineering student.

Rebecca Aker, North American Anthropology student, says the expectations were high and the camp revealed to be better than she expected and the work field was useful "because it focuses on a period I never studied and I think it will give me a valuable contribution as a student and as a professional as well as more practical experience in field work".

About the advances in the study on the territory occupation, the Camp Director reveals new data about the characteristics of the megalithic grave of Cabeço da Anta, explored for five years in this project's context, and there is also potential in the Castle of Chão do Trigo, after the first intervention in this issue and which deserves further research.



Within this year's CAIPN edition several free access conferences are taking place, in Casa das Associações in Proença-a-Nova, focusing on various themes complementing archaeology and history studies. August 11 is the date for the last two lectures. First at 4.30pm about "Science and Fiction on Bioarcheology – ways to fill the gap between the past and the present" and the speaker is Francisco Curate. Andrea Martins will present "Schematic rock paintings – the shelters of the Centre and Southern Portugal" at 6.00pm. On the same day as part of the "Live Summer Science network 2017" activity is the initiative "Summer Heritage: discovering megalithic monuments". Carlos Neto de Carvalho joined a visit through the heritage of the municipality of Proença-a-Nova. It should also be recalled that integrated in this VI International Archaeologist Camp, Proença-a-Nova will receive the 1st International Congress on Archaeology and History "The Defensive lines between the 17th century and Napoleon", on September 1st and 2nd.

**19 July – Summer Geology "Vale Mourão's Secrets"**. The Living Science Center of Forest hosted a free activity on Live Science on Summer Network opened to the general public. Taking advantage of the walking trail along the Geomonument Portas de Almourão, they carried out a geological visit.



**20 July – Instructors training course.** Another field day dedicated to a training course for Naturtejo Geopark's instructors in Oleiros and Proença-a-Nova, focusing on the traditional Isna Village on the International Appalachian Trail, on Cascata da Frágua da Água d'Alta and Centro Ciência Viva da Floresta. This training course was provided by Joana Rodrigues.



**21 July to 31 December – Opening of exhibition on Gold at the 10th anniversary of the Living Science Center of Forest.** The Living Science Centre of Forest in Proença-a-Nova, Naturtejo Geopark's partner since the beginning, celebrated its 10th anniversary, as the most visited infrastructure in Proença-a-Nova, with more than 130.000 visitors. As tribute to Mariano Gago the CCV Auditorium was baptized under his name, as he was mentor of Living Science Centres and a big supporter of science as part of the whole society, approaching scientific community to the public. The Unit Mission Coordinator for Developing the Interior, the President of the Living Science Network, among other entities in the region attended this event, as well as children from the summer activities centres. Naturtejo Geopark was represented by Joana Rodrigues and Manuela Catana.

The celebrations included the opening of the exhibition “Gold – from the Universe Formation to the Space Conquest”, a partnership between CCV, the municipality of Proença-a-Nova and Naturtejo Geopark with the presence of the President of the Municipality of Proença-a-Nova, João Lobo, the CCV Coordinator, Edite Fernandes and Naturtejo Geopark's Geologist, Joana Rodrigues. This exhibition shows the origin of gold on the planet Earth, its concentration in mineral deposits and the way Man explored in the area of Proença-a-Nova since at least the remote Roman period, leaving deep marks on the landscape, still visible today, to exploitation “gandaia” way made until the mid 20th century, in an exhibition path inviting visitors to discover gold nuggets in the sands of the river or simulate an entry into a mining gallery. Currently gold mining is not profitable in this territory however, the ancient technique of prospect for gold in the Ocreza River was transformed into a tourist product and visitors have the opportunity to learn during the tourist experience, whose importance has been widely highlighted and underlined by the President of the Municipality of Proença-a-Nova.

**21 to 25 July – MTB in the Geopark.** 4 Spanish tourists stayed at the Geohotel in Monsanto to ride some of Naturtejo Geopark's MTB trails.

**21 to 23 July – Geopark in Lynx Lands Festival.** Penamacor hosted another edition of the “Lynx Lands” Festival, with 50 exhibitors, music and local gastronomy. This event is organized by the Municipality of Penamacor and aims to promote regional products and boost tourism and local economy.

Besides regional products, gastronomy and handicrafts the Festival also features small taverns, animation and musical performances. The Regional Products Route is also part of the event. This year for the first time visitors got to know local companies that opened their doors to introduce themselves and show their products. Naturtejo Geopark attended once again with a stand and was represented by Jorge Costa.



**26 to 30 July – III Rural Innovation World Forum with Cilento's presence awards local Geocompanies.** Feira Raiana in Idanha-a-Nova, established itself as the biggest event of cross-border cooperation between Portugal and Spain, with thousands of visitors in the most ambitious edition in an unprecedented bet on innovation in the Rural World. This year the highlight was for the green economy, energy efficiency, water sustainable management, food production, Biodiversity and Geodiversity management and conservation, in an Innovation Pavilion with a showroom and a tradeshow with 80 exhibitors, among which were Naturtejo Geopark, Villuercas Geopark (Spain) and some partners such as Geo Carne do Prado (Naturefields), Geolicores Acha Doce, Geocompany Aromas do Valado, Geocakes and Geopadaria Gaspar e Fernandes. RTP broadcast live for 6 hours from Feira Raiana, in the program “Aqui Portugal” and interviewed geoproducers, Naturtejo Geopark's partners. During the 5 days, in addition to a large display of rural and traditional products and gastronomy, parallel activities took place, like international delegations visits, new companies settling in the region, live cooking with meat from Geo Carne do Prado, musical entertainment, tastings, workshops and pyrotechnic show. Naturtejo Geopark was represented by Jorge Costa, Alice Marcelo and Joana Rodrigues.

The Rural Innovation World Forum, organized by the Municipalities of Idanha-a-Nova and Moraleja (Spain) took place in parallel with the 21st Feira Raiana, promoted debates, workshops where success stories were shared from Portugal, Spain, Italy, France and Germany and also a show for 80 innovative companies and start ups.

The Rural Innovation World Forum awards prized the Geocompany Aromas do Valado and an honourable mention was attributed to Geopadaria Gaspar & Fernandes, in the final certification phase as geoproduct from Naturtejo Geopark. For this prize applied 33 innovative projects of enterprises across the Euroace region (Alentejo, Centre and Spanish Extremadura) and the jury was made up of 12 elements from private to public entities from Portugal and Spain. The award ceremony was attended by the Minister of Economy, Manuel Caldeira Cabral and the State Secretary for Internationalization, Eurico Brillhante Dias, the Mayor of the Ayuntamiento of Moraleja, Julio César Herrero, the President of the Diputación de Cáceres, Rosário Cordero Martin and the President of the Junta of Extremadura, Guillermo Fernandez Vara.

The big winner Geocompany Aromas do Valado produces essential oils and organic cosmetic products from indigenous plants of Naturtejo Geopark. One of the four honourable mentions awarded Licinia Gaspar from Geobakery Gaspar & Fernandes, one of the latest Naturtejo Geopark's products, based in Penha Garcia near the Ichnological Park of Penha Garcia, in the Ponsul Valley, with 480 million years of geological history, where watermills were the central point in the village. The Geobakery currently produces the genuine traditional bread and also organic bread with the most advanced technology. Licinia Gaspar presented the draft of her Geobakery in the panel "The Food" dedicated to agro-food industry, connection and access to the market, distribution and new technologies, where several positive innovation experiences were shared. The panel "The Soil" focused on the interconnection of different life quality and sustainable production foundations, in the use of natural resources in a sustainable way. In order to make Idanha-a-Nova a "Municipality + Organic", stimulating organic production and green economy and creating conditions to establish new companies in the region, Emilio Buonomo attended the event. Emilio Buonomo represented Cilento and Vallo di Diano Geopark (Italy), partner of Naturtejo Geopark, and Custódio Oliveira represented the International Organic Districts Network. The project manager of the Organic-District of Cilento presented the best practices to be implemented in Idanha-a-Nova as Organic-District. These "Eco-regions" are areas where local agents work for the sustainable management of local resources, from an organic and ecological model.

**28 to 30 July - Novo Banco Club again in Naturtejo Geopark.** The Novo Banco Club brought another group of 31 collaborators for a program in Naturtejo Geopark. The group stayed at Hotel das Amoras in Proença-a-Nova, was guided by Rui Nunes and visited the Municipalities of Oleiros and Proença-a-Nova. The program started with a visit to the Traditional Village of Isna and the secular chestnuts, the wild chestnut trees in Isna with approximately 200 years have a high ecological value although not yet classified. For many years now the chestnut, the fruit from these secular trees has high quality and is greatly appreciated to local cuisine as a potential economic complement for this. In the village there is a thick chestnut tree that stands out from the rest not by its high, but by its trunk with a perimeter greater than 5m, sign of its secular antiquity. Then the group travelled to Estreito to visit the Church, build with local rock, quartzite, carried then from Serra do Muradal, whose imposing central façade has a great bas-relief referent to local culture. Next they stopped in the Viewpoint of Zebro located in a quartzite rock where the dizzying panoramic widen through the Ribeira das Casas da Zebreira valley runs 200m below. After the traditional flavoured lunch in Adega dos Apalaches, visitors walked on the Orvalho GeoTrail and visited the Fragua da Água D'Alta waterfall and the traces of the relic Laurissilva forest. At the end the group visited the Viewpoint of Mosqueiro. This Geosite is an excellent geomorphological viewpoint atop the Penedo das Sardas, 666m high and 300m above the Zêzere gorge, which offers an extensive perspective about the hilly terrain: the Central Mountains Belt; the granite from Gardunha and Estrela Mountains with a privileged view on the magnificent glacial Alforfa Valley; quartzite Appalachian-type landforms on Muradal Mountain and Penedos de Góis, to NW; the spectacular meanders of Zezere River; schist mountains of Açor (N), Lousã (NW) and Cabeço Rainha (SW). This viewpoint highlights not only the rocky outcrops, but also shrub consisting predominantly by helophytic scrubs.

The next day the group visited the Living Science Centre of Forest (Proença-a-Nova) for a workshop about honey. Later they visited the Schist Village of Figueira, with all its buildings made of schist, and interacted with farm animals, such as chickens, sheeps or goats and learned about baking bread in the Community Oven. The visitors had lunch in a traditional restaurant "Casa da Ti Augusta".



**31 July to 4 August - Revalidation of Grutas del Palacio Geopark in Uruguay .** Carlos Neto de Carvalho was selected by UNESCO to undertake the first revalidation process of Grutas del Palacio Geopark, in Uruguay. Located in the Department of Flores this Geopark covers a vast flat area and presents a low population density, mostly living from agriculture. Together with Dr. Xiaochi, they visited the infrastructures and sites of geological importance in the Geopark. Both were received by the local authorities, the local community in a welcoming event and by schools where the Geopark develops some activities. The evaluators received the governmental support through the Minister of Tourism and other authorities from Montevideo.

# IMPACT OF GEOPARK IN MEDIA



## Radio & TV

- 13 July – Jornal da Noite SIC, “Visão de Portugal” (SIC) – Penha Garcia
- 21 July - Jornal da Noite SIC, “Visão de Portugal” (SIC) – Portas de Ródão
- 26 July – Radio Interior (Extremadura, Spain) – Report about Naturtejo Geopark, in Feira Raiana
- 28 July – “Aqui Portugal” (RTP) – Feira Raiana
- 28 July – Rádio Condestável – Proença-a-Nova – “The Gold - from the Universe Formation to the Space Conquest”
- 29 July – Jornal da Noite, “Visão de Portugal” (SIC) – Monsanto

## Newspapers & www

- July (Municipal Newstetter from Penamacor) – Tourism – International Conference on Sustainable Tourism
- 12 July (Gazeta do Interior) – Beira Baixa's Ultra marathon is one of the hardest in the World
- 13 July (Reconquista) – Barrocal
- 19 July (Gazeta do Interior) – 10 years of Living Science Centre of Forest

# SCIENTIFIC CONTRIBUTIONS FOR THE GEO PARK AND THE GEOSCIENCES

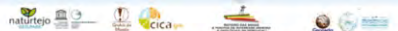
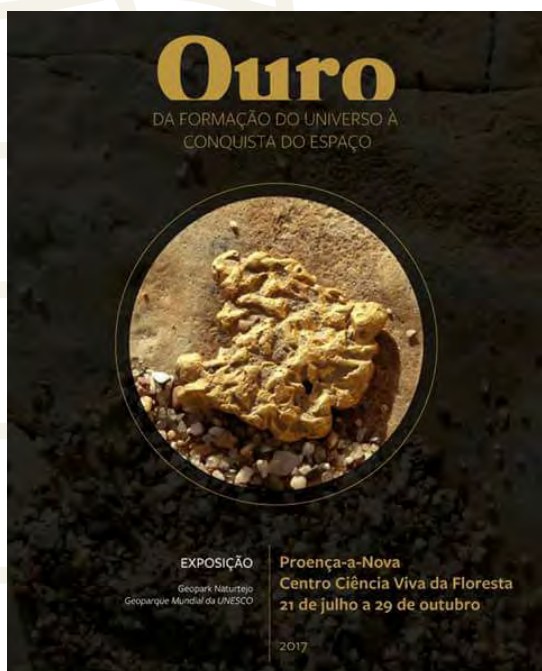


Rodrigues, J., Ramos, M. & Ramos, R. (2017). Aprender com Geocakes no Geopark Naturtejo, Geoparque Mundial da UNESCO. Livro de Resumos, IV Encontro Internacional da Casa das Ciências, Lisboa: 47-48.

# PROMOTION FOR THE GENERAL PUBLIC



- Guide for Fluvial Beaches, bathing and leisure areas, from Tejo to Douro. Blanche (in Portuguese).



**Summer Campaign**  
17 July to 13 August 2017

Archaeological Excavations  
Camp 1: 17 July to 13 August  
Camp 2: 17 to 30 July  
Camp 3: 30 July to 13 August  
Course of Initiation to the Prehistoric Lithic Technology  
19 to 21 July (12hours)  
Lectures  
28 July, 4 and 11 August  
Other field practices  
22 July and 5 August  
Field trip and discovery tour  
29 July and 12 August  
Contacts for further information:  
+351 939 127 478 (Municipality)  
alltoejo@gmail.com  
archaeologicalfieldcamps-portugal.pt

2017

Proença-a-Nova International Archaeological Field Camp  
**Campo Arqueológico de Proença-a-Nova**  
Portugal

## PROMOTION FOR THE GENERAL PUBLIC



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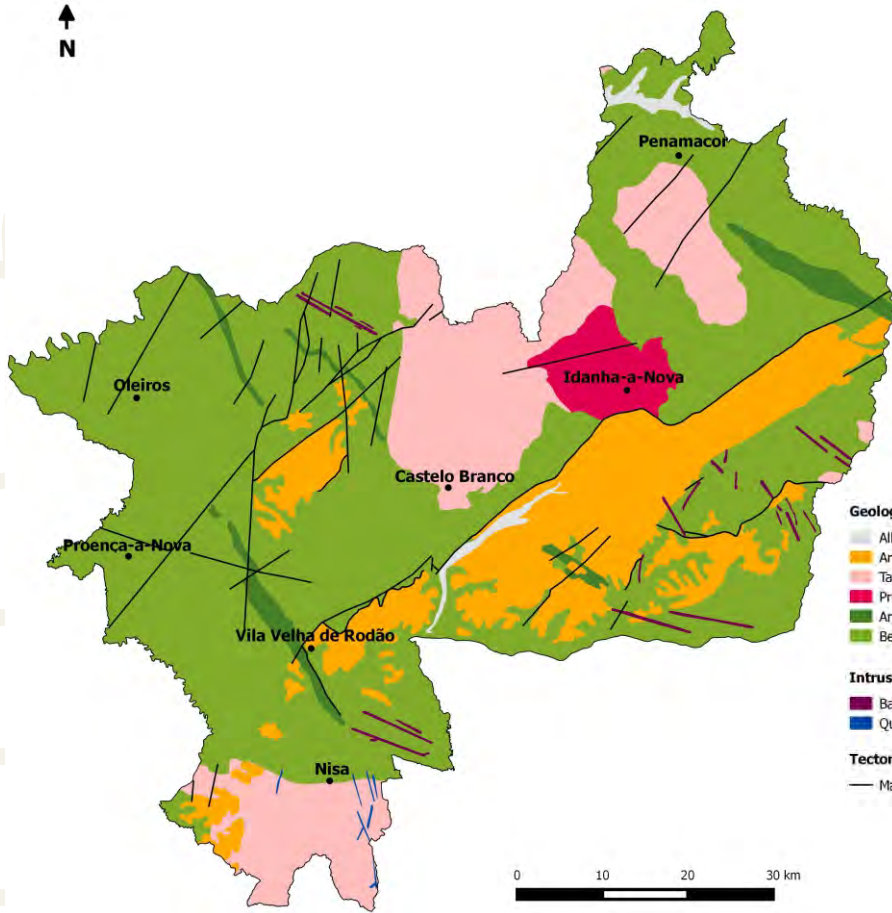


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[www.slideshare.net/geoparknaturtejomesetameridional](http://www.slideshare.net/geoparknaturtejomesetameridional)





#### Geological Formations (Ma-Million years)

- Alluvium and fluvial terraces - Plistocene-Holocene (1Ma-present)
- Arkoses, breccias and conglomerates - Eocene-Pliocene (50-2.6Ma)
- Tardi-Variscan orogenic granites (315-300Ma)
- Pre-Variscan granodiorites (480-472Ma)
- Armorican Quartzite and schists - Ordovician-Lower Silurian (488-435Ma)
- Beiras Group (schists and greywackes) - Neoproterozoic (610-542Ma)

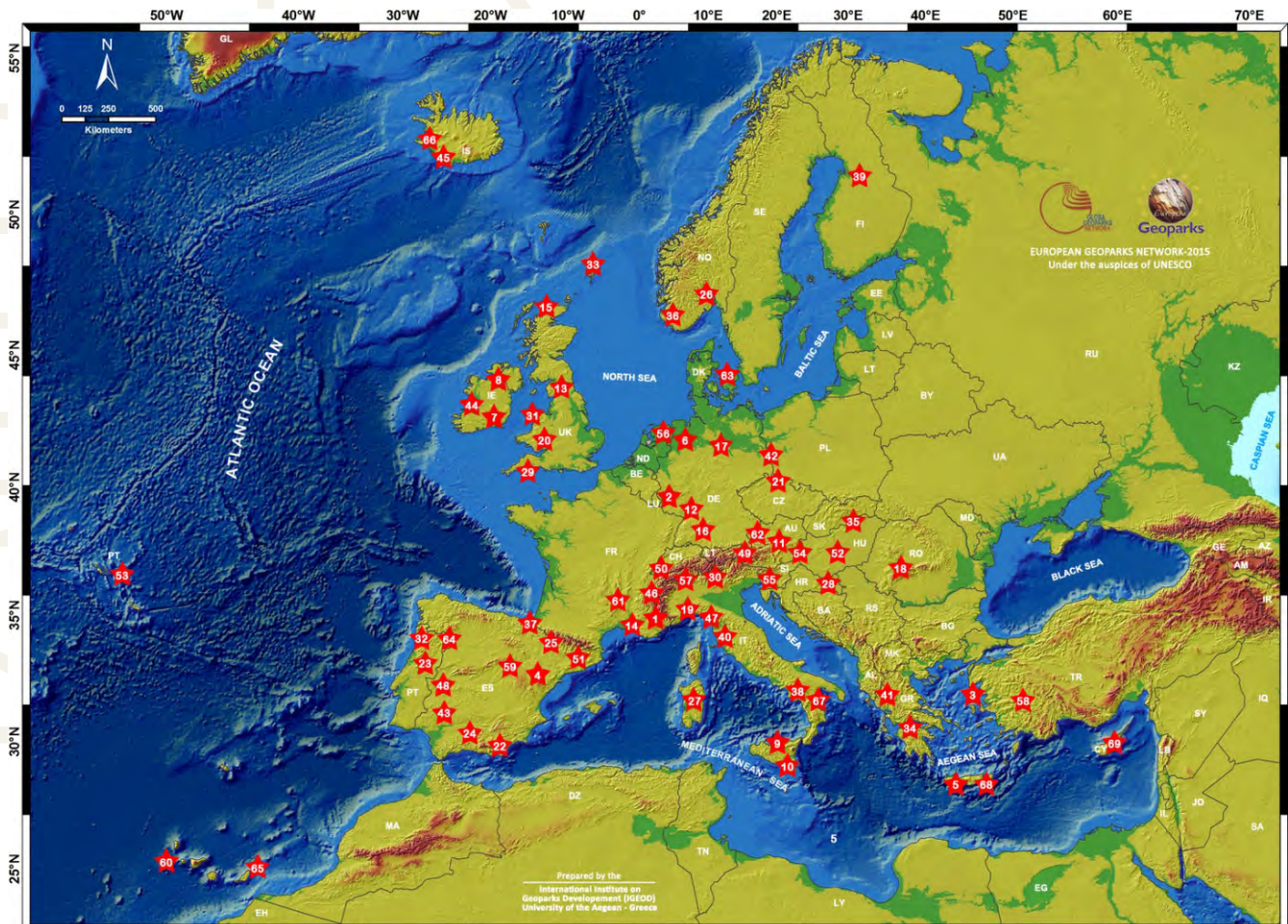
#### Intrusive rocks

- Basic rocks, aplites and pegmatites
- Quartz

#### Tectonic

- Main faults

## Geoparks: Geology with human face





Edition - Geopark Naturtejo, 2017  
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**CRUZIANA**

GEOPARK NATURTEJO DA MESETA MERIDIONAL EUROPEAN AND GLOBAL GEOPARK MONTHLY REPORT

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