



In this issue:

Penamacor Bonfire Village with environmental activities dedicated to the Forest
Geosciences are a benchmark on Naturtejo Geopark
Bakony-Balaton UNESCO Global Geopark visit Naturtejo Geopark to analyse the development of
Geoproducts
Christmas in Naturtejo Geopark
... and more!

CRUZIANA

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

GEO-stories of our places and people: Penamacor

Penamacor crowns the imposing granite scarp rising up the southern Meseta, predicting the ascent to Malcata Mountain. In fact, this is the first of multiple tectonic Alpine source steps that constitute the Malcata. The fault valley of Valdedra is the most extraordinary form of relief associated with these faults, splitting the mountain from North to South. The surface of Castelo Branco is sprinkled with small granite residual landforms that add up to Penamacor forming the Plutonite of Monsanto-Penamacor. Malcata Mountain is almost entirely composed of shales, sometimes bristled with quartz veins ridges, extending as long as 12 km, between the Barroca da Ventosa and Ginjeiros. In Roman times these veins, with their iron-rich crusts, were targets for gold mining, with the actual presence of numerous wells and trenches in a vast area, particularly the Buraco das Revoltas. But the most surprising are the large mining pits of the Presa and Covão do Urso, located in Meimoa Valley. Once, the Bazágueda Stream ran here to west as Zêzere river tributary. The river basin was captured by the Erges River dictated this stream to come down windingly the Malcata so that its waters thicken the Erges on the way to Tejo River towards south. The youth of Bazágueda has enabled the development of a milling industry still present on its banks. A huge flat-bottomed valley of alluvial deposits rich on economical important metals, such as gold or tin was left behind. At Presa the Romans settled camp and opened two huge pits and left numerous marks of their mining engineering for the precious metal. In Lenteiro they installed a mining Vicus. In Saibreira, Coito das Portelas and Bom Sucesso rose Roman settlements. Much later it would lead to be explored in the Mines of Ceife, on the basis of this "Larger Rock". The landscape between the plain and the mountain hold one of the most strict conservation statuses in Portugal. Malcata Reserve is a vast territory depopulated but rich in nature, particularly valuable in the valley of Quinta do Major, with potential to use for tourist activities in the Protection Special Site Natura 2000. The Montagu's Harrier, the Black stork and the Black Vulture are among the numerous species of birds. The viewpoint of Sete Concelhos, in the heart of the Nature Reserve, reaches almost the entire territory of Naturtejo Geopark.

The largest parish in the Geopark's territory, with 373,33km², Penamacor is Nature but also History. In the heart of Malcata Mountain funerary monuments were built in the Neolithic. At the top of the granitic mountain in a natural shelter located in the Municipal Forest, is located the large "sun" of Casa do Ramalho, to testify the antiquity and the geo-strategic importance of these places, since the Chalcolithic.

Monte do Frade was once, between the 12th -10th centuries, an important house. Other evidences of this period include Ramalhão and Cabeço da Malhoeira. Wandering through the village we still feel the importance of the medieval stronghold whose history, and the municipality's, is reflected through numerous elements in the Municipal Museum. The Foundation of Penamacor dates back from 1189 and related to the Knights Templar. From the castle, a National Monument, remains the powerful Watchtower, the wall with the Clock Tower, the cistern, the Village Gate and the Town Hall.

GEO-stories of our places and people: Penamacor

Along with this monumental settlement rises the Pillory and the Mercy Church, with an aesthetic Manueline Gate. The major importance of Penamacor as a military town grows with the Wars of Restoration in the second half of the 17th century.

Bulwarks emerge through the village, of which only four remain, making the top of the Granitic Mountain a great fortress. As everything is so close, it is worth to visit the Church of the Convent of Santo António, often staged, as well as the small chapel that looks like a sigh, just above this. At the height of this period António Nunes Ribeiro Sanches was born, in 1699, the great doctor of the "love diseases", Member of the academies of Sciences of Saint Petersburg, Paris, and of the Royal Society of Paris, doctor of czarina Anna Ivanovna. The biggest figure of science from Penamacor who as a young man was cured by the waters of Monfortinho dedicated it his first scientific work, and soon will have a space dedicated to his life and work.

With a vast territory, natural scenery and a long history, Penamacor is a Sustainable Tourism Destination under construction. Hotel units begin to emerge in charming corners, like the Moinho do Maneio watermill. The first track of a network of hiking routes makes it possible to visit the village. The Great Route of Historical Villages crosses the municipality. With a population of 1577 inhabitants and a small tourism business sector, tourism has great potential in Penamacor. The Lynx Fair and the Bonfire Village during Christmas season are the two major seasonal events to promote its resources and potential at a national level. In this "Penha Maior", with awesome landscapes to enjoy with a cup of hot tea in the viewpoint of the ancient military barrack, land made with a magnificent honey from the vast fields of heather and Malcata broom, in a mountain waiting for the return of the most delicate and endangered feline in the world, image of a Natural Reserve and symbol of resilience to extinction, gather the ingredients to success. The future lies in the quality of its products, the Lynx, the adequate promotion of the natural landscape and products, valuing creative tourism in one of the last natural territories in Portugal.

Bibliography

BORGES, M. Penamacor Militar. Da Restauração à República 1640-1910.

CAMPOS, T.F.C. (1987) – Geoquímica das rochas graníticas e seus minerais do plutão de Penamacor-Monsanto e algumas considerações sobre possível mineralização estanífera. Tese de Mestrado, Universidade de Coimbra: 83pp.

COSTA, I.R., ANTUNES, I.M., GUIMARÃES, F., FARINHA RAMOS, J., RECIO, C., BARRIGA, F. & MOURÃO, C. (2012) – Compositional trends in tourmalines from granites and quartz-tourmaline rocks from the Penamacor-Monsanto pluton (Eastern Central Portugal). 22nd V.M. Goldschmidt Conference, Montréal, 2012. Abstract #220 CD.

GEO-stories of our places and people: Penamacor

COSTA, I.R., ANTUNES, I.M., GUIMARÃES, F., RODRIGUES, P.C.R., BARRIGA, F., MOURÃO, C., FARINHA RAMOS, J. & RECIO, C. (2012) – Transition metals responsible for striking colour variation in tourmalines: an EMP study of tourmalines from granites and quartz-tourmaline rocks associated to the Penamacor-Monsanto pluton (Eastern Central Portugal). First European Mineralogical Conference, Frankfurt, Abstract EMC2012-414.

COSTA, I.R., ANTUNES, I.M., FARINHA RAMOS, J., RECIO, C., BARRIGA, F., MOURÃO, C., GUIMARÃES, F. & FERREIRA, N. (2013) – Aspectos petrográficos do metamorfismo de contacto associado ao plutão granítico de Penamacor-Monsanto. *Comunicações Geológicas*, 100(1): 89-98.

COSTA, I.R., ANTUNES, I.M.H.R, MOURÃO, C., RECIO, C., GUIMARÃES, F., FARINHA RAMOS, J. & BARRIGA, F.J.A.S. (2018) - Contact metamorphism associated to the Penamacor–Monsanto granitic intrusion (Central Portugal): geochemical, isotopic and mineralogical features. *Journal of Iberian Geology*, 44(2): 335-353.

FIGUEIREDO, F.P.O., CATARINO, L.M.G., CORREIA, C.G., CASTILHO, A.M.A. & RODRIGUES, N.E.V. (2010) – Método electromagnético aplicado no estudo da pluma de contaminação da escombreira da Mina de Ceife (Penamacor). *e-Terra*, 10(3): 1-4.

GAMA PEREIRA, L.C. (1976) – Notícia sobre o Complexo Xisto-Grauváquico de entre Capinha e Penamacor (Beira Baixa, Portugal). *Memórias e Notícias, Publicações do Museu de Mineralogia e Geologia e Centro de Estudos de Geologia da Universidade de Coimbra*, 82: 61-66.

GOMES, A.C. (2001) – Convento de Santo António de Penamacor. Câmara Municipal de Penamacor.

HENRIQUES, H.M.G. (coord.) (2009) – Penamacor: 800 anos de história. Câmara Municipal de Penamacor.

LANDEIRO, J.M. (1995) – O Concelho de Penamacor na Tradição na História e na Lenda. Câmara Municipal de Penamacor.

MENDES, L.G. (2014) – Marcas judaicas no Urbanismo e na Arquitectura de Penamacor. Câmara Municipal de Penamacor.

NEIVA, A.M.R. & CAMPOS, T. (1991) - O plutão granítico zonado de Penamacor-Monsanto, Centro de Portugal: génese e alteração hidrotermal. III Congresso Nacional de Geologia: 58.

NEIVA, A.M.R. & CAMPOS, T.C. (1992) - Genesis of the zoned granitic pluton of Penamacor-Monsanto, central Portugal. *Memórias e Notícias, Publicações do Museu e Laboratório de Mineralogia e Geologia da Universidade de Coimbra*, 114: 51-68.

RABAÇA, T.J.L. (2001) – Caracterização Geoambiental da região de Penamacor-Idanha por aplicação de técnicas de Detecção Remota. Tese de Mestrado, Universidade de Coimbra, 226pp.

NEIVA, A.M.R. & CAMPOS, T.C. (1993) - The zoned granitic pluton of Penamacor-Monsanto, central Portugal: hydrothermal alteration. *Memórias e Notícias, Publicações do Museu e Laboratório de Mineralogia e Geologia da Universidade de Coimbra*, 116: 21-47.

GEO-stories of our places and people: Penamacor

RABAÇA, T.J.L., CONDE, L. N., PINTO, A.F.F. & PEREIRA, A.J.S.C. (2004) - Geological Mapping of the Penamacor – Idanha-a-Nova Zone (Central Portugal) by Digital Classification. Geoscience and Remote Sensing Symposium, 2004. IGARSS '04. Proceedings. 2004 IEEE International (Volume:2): 1310-1313.

SÁNCHEZ-PALENCIA, F.J. & PERÉZ GARCÍA, L.C. (2005) – Minería romana de oro en las cuencas de los ríos Erges/Erjas y Bazágueda (Lusitania): la zona minera de Penamacor-Meimoa. Actas das 2^{as} Jornadas do Património da Beira Interior, Guarda: 267-307.

SÁNCHEZ-PALENCIA, F.J., ORTEGA, A.B., PERONA, D.R., REFOJOS, B.C., DÍEZ, G.R. & PrATS, I.S. (2013) – Zonas mineras y civitates del noreste de Portugal en el Alto Imperio (zona fronteiriza con España de los distritos de Braganza y Castelo Branco). Informes y Trabajos. Excavaciones en el exterior 2011, 9: 606-627.

SEQUEIRA, A.J.D. (1991) – O Grupo das Beiras (Complexo Xisto-Grauváquico) entre Zebreira e Penamacor e a sua relação com o Ordovícico. III Congresso Nacional de Geologia, Coimbra: 77.

TEIXEIRA, C., PERES, A.M., PILAR, L. & FERNANDES, A.P. (1960) – Carta Geológica de Portugal na escala de 1:50000. Notícia Explicativa da Folha 21-B Quadrasais. Serviços Geológicos de Portugal, 15 pp.

VILAÇA, R. (1991) – O povoado pré-histórico do Ramalhão. Câmara Municipal de Penamacor.

VILAS BOAS, M., NETO DE CARVALHO, C., RODRIGUES, J.C. & VALENTE, A. (2015) – Património Geológico de Penamacor: inventário de Geossítios e propostas para a sua valorização. Açafa Online 10, 23-72.

Cover: (Projecto Objectiva: Geopark)

The editor
Carlos Neto de Carvalho
Scientific coordinator
Geologist



MONTHLY ACTIVITIES

November / December – Exhibition “Between Narrow Streets and Alleys” in Proença-a-Velha. Within the framework of the celebration of 800 anniversary of Proença-a-Velha the exhibition “Between Narrow Streets and Alleys” of Urban Sketch describes the architecture and everyday life in the village, by the artist Vasco Custódio. The exhibition will be opened during Christmas period in the Complex of Olive Oil – Mills of Proença-a-Velha.

1 December/ January 2019 – Exhibition “Encantal” of biodiversity in Centro Cultural Raiano. “Encantal” is the newest exhibition of Luísa Nunes in Centro Cultural Raiano. For the last 2 years and many more of field work Luísa Nunes went through Beira Baixa, in the territory of Naturtejo Geopark and explored the most secret places in the natural world. In a not always easy surrender, she wrote and illustrated as seen animals, plants and habitats. Illustration is a tool of communication and science exhibition, promoting conservation and biological literacy. Science always relied on visual representation to convey key concepts. The advantage of the illustrations is that it can show what is not easily observable to the naked eye through the presentation of important details or features lost by scientific description or photographs. This exhibition is part of the agenda of the Festival “Out of Place”.



4 December – Elementary School of Idanha-a-Nova sowing acorns of native trees. 27 students from 5th and 7th grades of the School Group José Silvestre Ribeiro and 3 teachers went to Tapada do Sobral, near the swimming pools in Idanha-a-Nova and get to know better the habitat of one of the species of native trees they sowed. The group collected acorns of cork oaks and next sowed in small vases. They also sowed black oaks and holm oaks, learned to differentiate leaves and acorns of each of these 3 native species. During the school year students will take care of the plants and in Fall of 2019 will be planted out in the same spot. The instructor for this activity was Manuela Catana.



5 December – Guided Tour to the Exhibition “Encantal: the Natural World of Beira Baixa” in Centro Cultural Raiano. Eight children from the Kindergarten of Termas de Monfortinho accompanied by one teacher and one assistant visited the Exhibition “Encantal: the Natural World of Beira Baixa” of Luísa Ferreira Nunes. This visit was guided by Manuela Catana.



6 December – Study Visit of EGIN Students to the Exhibition in the Interpretative Centre for Biodiversity “Lands of Idanha” and birdwatching in the fluvial gorge of Erges River. 6 students from the 3rd year of Touristic Management Course from the School of Management in Idanha-a-Nova had a study visit to the International Tejo/Tajo Natural Park in Segura. This visit happened during the celebrations of the month of Biosphere Reserve Tejo/Tajo International. The group was guided through the exhibition in the Interpretative Centre for Biodiversity “Lands of Idanha” and made birdwatching in the geomonument “Fluvial Gorge of Erges River”. The instructor for this activity was Manuela Catana supported by two Tourism Technicians from the Municipality of Idanha-a-Nova.

6 to 9 December – Spanish group visits Historical Villages. The Spanish Tour Operator Geographica brought 35 Spanish tourists to discover the territory. The group was hosted at Hotel Rainha Dona Amélia in Castelo Branco. The tour guide João Galdes accompanied the group through a walking trail between Idanha-a-Velha and Monsanto and a guided tour through Monsanto.

7 December – Barco del Tajo brings Spanish Tourists to visit the Geopark. A group of 39 Spanish Tourists sailed across the Tejo River to the Pier of Ceclavín and crossed the border with Naturtejo Geopark as destination to visit Idanha-a-Velha and Monsanto. The group was guided by Jorge Costa. This visit occurs from a partnership between Naturtejo Geopark and the company Barco del Tajo.



11 December – Naturtejo Geopark invited to present good practices in the International Project REMIX. The project REMIX gathers representatives from several European entities and aims to develop mining exploration through sustainable practices. Carlos Neto de Carvalho was invited to the meeting in the nearby municipality of Fundão aiming to present Naturtejo Geopark as a case of good practices on valuing the Geological Heritage through geotourist activities.

12 December – Orimadeiro with many young people. During the activities “Penamacor – Bonfire Village” the Municipality arranged an orienteering competition. Almost three hundred young participated in the orienteering challenge Orimadeiro, representing an increase of 40% compared to last year. The theme for this third edition was “Christmas in the Forest” and hosted activities in the tent with the same name in the ancient military barrack. This year the event had new challenges, first for kids representing fauna in the municipality, the other for seniors to stimulate the memory. The other challenges were about Heritage in the Village, water, flowers and Jewish marks.

This edition was attended by students from EB2,3 from the School Group Ribeiro Sanches, the School Centre of Penamacor, the Kindergarten Nossa Senhora das Dores and Schools from Nelas, Covilhã and Sertã.



12 and 13 December – Geosciences are reference in Naturtejo Geopark. Christmas is about preparations to receive family and prepare the New Year that is coming. But the scientific work in Naturtejo Geopark, UNESCO Global Geopark doesn't slow down, claiming a bigger importance in the region. The Geologist Martim Chichorro, from the Investigation Centre GeoBioTec from the Faculty of Sciences of the New University in Lisbon, developed last week a fieldwork in Penha Garcia and in the region of Salvaterra do Extremo along with the scientific coordinator of Naturtejo Geopark, Carlos Neto de Carvalho, and the Geologist João Geraldês. These works are included in a protocol currently being concluded between the Municipality of Idanha-a-Nova and the Geosciences Department of this University, which will make possible to determine roughly the isotopic age of the quartzite formations in Penha Garcia, so as the older glaciogenic formations of Erges River and the tonalite rocks in Batão de Baixo, both places near Salvaterra do Extremo and the geomonuments of the Geosites inventory that supported the UNESCO classification. The studies of this researcher will contribute to determine the origin of the sediments that gave rise to these rocks and so, to the knowledge of the older rock formations known in Portugal. Moreover Penha Garcia continues to attract the attention of specialists, with the completion of the studies of Carlos Neto de Carvalho and Aram Bayet-Goll, from University of Zanjan, Iran, who will introduce a model of paleoenvironmental interpretation detailed and innovative, currently being published.



14 December – Christmas Party for Children in the Tent Christmas in the Forest. More than one hundred children participated the usual Christmas Party, this in the Tent "Christmas in the Forest", in the ancient military barrack of Penamacor. This initiative hosted children from the Elementary School from the School Group Ribeiro Sanches and the Kindergarten Nossa Senhora das Dores. In the morning children attended the theatrical presentation "Christmas in the Forest's Band". After that children presented papers about Christmas, heard music, danced and waited for the arrival of Santa Claus before lunch.

During the afternoon the group attended environmental activities with educationally-oriented games arranged by the Municipality of Penamacor in partnership with the Educational Service of Naturtejo Geopark, UNESCO Global Geopark. The papers made by children are in exhibition in the tent.

The Tent "Christmas in the Forest" is part of Penamacor Bonfire Village agenda. During the opening hours visitors can find educationally-oriented games, Films of Nature, Slidemove, where they can take a picture "in the forest" and virtual reality equipment where visitors can see the forest at 360 degrees. Also in the programme are gastronomy workshops "Flavours from the Forest".

This action is part of the Efficiency Collective Strategy PROVERE iNature – Sustainable Tourism in Classified Areas, co financed by the European Found for Regional Development (FEDER), by CENTRO 2020 - Regional Operational Programme for Centre, Portugal 2020 and European Union, with Naturtejo as leader partner.

The instructors for these environmental activities on native forest and Naturtejo Geopark, UNESCO Global Geopark were Mariana Vilas Boas and Manuela Catana supported by Technicians from the Municipality of Penamacor.



15 December – Students of Palaeontology from the Faculty of Sciences of Lisbon University visited the Palaeontological Site of Cabeço da Ladeira in the Natural Park of Serra d'Aire e Candeeiros. In the scope of the discipline of Palaeontology of the degree in Geology in Faculty of Sciences of Lisbon University, Carlos Neto de Carvalho was invited to guide the visit of 35 students in the Palaeontological Site of Cabeço da Ladeira. Note that this investigator of Naturtejo Geopark was invited by the National Laboratory for Energy and Geology to participate in the research team to study this Palaeontological Site from the Middle Jurassic in the Natural Park of Serra d'Aire e Candeeiros.

15 December – Horse Riding Bonfire Village. The Horse Riding Penamacor Bonfire Village gathered 42 riders. This 5th edition, supported by Naturtejo Geopark through iNature Project, got an increase in participants over the previous years, and also attracted riders from the neighbour Spain. Participants ride through the village and the municipality, for an event aiming to show the potential of the municipality of Penamacor to equestrian tourism and show visitors Penamacor Bonfire Village.

15 December – Second Meeting of Songs to Baby Jesus in the Convent of Santo António in Penamacor. This initiative is part of the Programme Penamacor Bonfire Village and hosted several groups from different parts of the country as the Folklore Group "White House Weeders" from Sousel, representing High Alentejo, Cavaquinhos (small 4-string guitar) from Rebordosa, representing Beira Litoral Highlands, the Folklore Group of Vila Nova, also from Beira Litoral Highlands and the host group Ancient Songs, representing Penamacor and all Beira Baixa.

Songs to Baby Jesus is also known as Songs of Christmas Cycle and are true pictures of the poorly studied ethno musicological point of view. However it is known that to the 20th century communities were important, for it was through the songs they express the devotion to Christian religion. This cycle starts by collecting the bonfire and ends in January. These songs are connected to four different moments: collecting the Bonfire; lighting it and the Midnight Mass with the chants to the baby Jesus; the Three Kings Day, with songs to the Kings; and the New Year Songs, during the month of January where groups asked for what families could give.

15 December – Christmas Concert in the Mother Church of Penamacor. The Mother Church of Penamacor hosted again the Christmas Concert from the Music and Dance Academy of Fundão (AMDF) which counted with the participation of students from this Academy Centre in Penamacor.

15 and 16 December – Traditional Flavours in Idanha-a-Nova. The local Marketplace in Idanha-a-Nova hosted another Christmas Event. Traditional Flavours received several activities, such as live cooking of Christmas candies, a walking trail and the traditional athletics competition S. Silvestre. This event ended with the traditional arrival of the bonfire.

15, 29 December – Staged Trails in Gardunha. The village of Lourical do Campo was the stage for two staged walking trails aiming to present Gardunha Mountain in its natural and cultural dimension. These initiatives were part of the iNature Programme of Naturtejo Geopark and aim to value cultural and natural resources of the Geomonuments.

16 December – Walking trail Christmas in the Forest. Penamacor arranged another walking trail. This time the participants were invited to plant native species in the Municipal Forest.



16 and 17 December – UNESCO Geopark Bakony-Balaton visits Naturtejo Geopark to analyse the development of geoproducts. A team of 3 managers of UNESCO Geopark Bakony-Balaton in Hungary held a working visit to Naturtejo Geopark. Integrating the Interreg Danube GeoTour Project, for which Naturtejo was invited as reference partner, the three managers came to know the certification of origin project Geoproduct and the way Naturtejo Geopark cooperates with its entrepreneurs to jointly promote local products with exceptional quality – Geoproducts – as well as to know strategies to value the Geological Heritage in the region. Noteworthy the special support of the companies Geocakes and the Geo-Restaurant Petiscos & Granitos from the Municipality of Idanha-a-Nova, Vila Portuguesa from Vila Velha de Ródão and the Honey Doce Paixão, by Luís Farinha in Proença-a-Nova who made this work visit a success.

17 December – Naturtejo's Team Christmas Dinner in Castelo Branco. The team Naturtejo, the company which manages Naturtejo Geopark, UNESCO Global Geopark gathered to the Christmas Dinner. This is the annual event to get together the entire team and family. This year, the place selected to the event was Hotel Rainha Dona Amélia, associate of the company.



20 December – Guided Tour to the Exhibition “Encantal: the Natural World of Beira Baixa” in Centro Cultural Raiano. This exhibition is a result of a two years field work in Beira Baixa by the naturalist and scientific illustrator Luísa Ferreira Nunes. The exhibition includes elements of flora, fauna and their habitats. This delight exhibition is an excellent tool of education and environmental awareness. On this day, 12 children and assistants from the Junior Space of Idanha-a-Nova held a guided tour and additionally participated in a field trip in Tapada do Sobral, near Centro Cultural Raiano, where identified some species of flora and fauna (and their habitats) which were illustrated in the exhibition. Manuela Catana guided the tour and the field trip supported by a tourism technician from the Municipality of Idanha-a-Nova.

21 to 23 December – Christmas Market in Idanha-a-Nova. The Christmas Market in Idanha-a-Nova aims to promote local products in the Municipal Marketplace with an environment of Christmas Spirit. The Traditional Chant Group of the Senior University of Idanha-a-Nova performed for the opening ceremony and received the visit from the children from the Kindergarten. “It means a lot to gather our children along with students from the Senior University, so they can share their songs and Christmas traditions with the younger”, said Armindo Jacinto, president of the Municipality of Idanha-a-Nova and Naturtejo Geopark. He also explained that “the Christmas Market and other initiatives developed by the Municipality invite people to shop local producers and products”. Mornings had music shows, cooking workshops, body sugar and blood testing and also the presence of Santa Claus and the Three Kings.

23 December – Bonfire Village Solidary Race. The second edition of the Bonfire Village Night Solidary Race took place in Penamacor. After last year the revenue was for the fire victims, this year, the amount for the inscriptions was delivered to the Voluntary Fire Fighters of Penamacor. The race, part of Penamacor Bonfire Village, aimed to promote running in the municipality, sports modality once very popular in Penamacor and also to share some corners usually not visited by locals. This initiative was the result of a joint venture between ADEP and the Municipality of Penamacor, supported by Naturtejo Geopark through the iNature Project.

31 December – End of Year in Naturtejo Geopark. On the last day of 2018 Naturtejo Geopark hosted a tourist group from Barcelos for a walk through the Fossils Trail in Penha Garcia and the Boulders Trail in Monsanto guided by Rui Nunes.

IMPACT OF GEOPARK IN MEDIA



Newspapers & www

5 December (Povo da Beira) – Spanish students visit Penamacor

6 December (Jornal de Leiria) – Crabs may have given first steps in Porto de Mós

PROMOTION FOR THE GENERAL PUBLIC



exposição/exhibition

A FLORESTA QUE NOS UNE

united by the forest

GRUTAS DA MOEDA
SÃO MAMEDE

JULHO 2018 ABRIL 2019
july april

Proença-a-Velha

800 ANOS REPLETOS DE HISTÓRIAS

FORAL D 1218

COMEMORAÇÃO DOS 800 ANOS DO FORAL DE PROENÇA-A-VELHA (1218 - 2018)

PROGRAMA 19 e 20 JANEIRO 2019

19 JANEIRO 2019
(Tarde) - Inauguração da Exposição: "Entre queilhas e vielas" de Vasco Custódio
Porto de Honra
Centro Cultural Raiano, Idanha-a-Nova

20 JANEIRO 2019

14H15 - Missa Solene, com a participação do Orfeão de Castelo Branco
Igreja Matriz, Proença-a-Velha

15H30 - Colóquio: Igreja da Misericórdia, Proença-a-Velha

- Proença-a-Velha no contexto do povoamento da Antiguidade Clássica e Tardia
Dr. Patrícia Dias / Dr. José Crisóstomo / Dr. Tomás Cordeiro
- Projecto Ordo Christi - O Património da Ordem de Cristo entre o Zêzere e o Tejo e o contexto da Proença-a-Velha
Prof. Doutor João Neves / Dr. Ricardo Silva
- Quando a gente andava ao "menério"
Mestre Eddy Chambino / Dr. Carlos Neto de Carvalho
- O vapor na agricultura mecanizada
Doutor Jorge Castilho

17H00 - Concerto de Reis: Orfeão de Castelo Branco
Igreja da Misericórdia, Proença-a-Velha

Lanche
Salão Multissalas



ENCANTAL

O MUNDO NATURAL DA BEIRA BAIXA

Ilustrações e Textos de Luísa Nunes

CENTRO CULTURAL RAIANO 2020

DEZEMBRO /18 > JANEIRO /19
Centro Cultural Raiano
Idanha-a-Nova

Centro Cultural Raiano FCT

Idanha-a-Nova Território UNESCO

INFORMAÇÕES: 0035 221 221 992 | www.ccr-raiano.pt | www.idanha-nova.pt

PROMOTION FOR THE GENERAL PUBLIC



Visite o Geopark Naturtejo em:



www.geoparknaturtejo.com



www.facebook.com/geoparknaturtejo.mesetameridional



www.instagram.com/geopark_naturtejo/



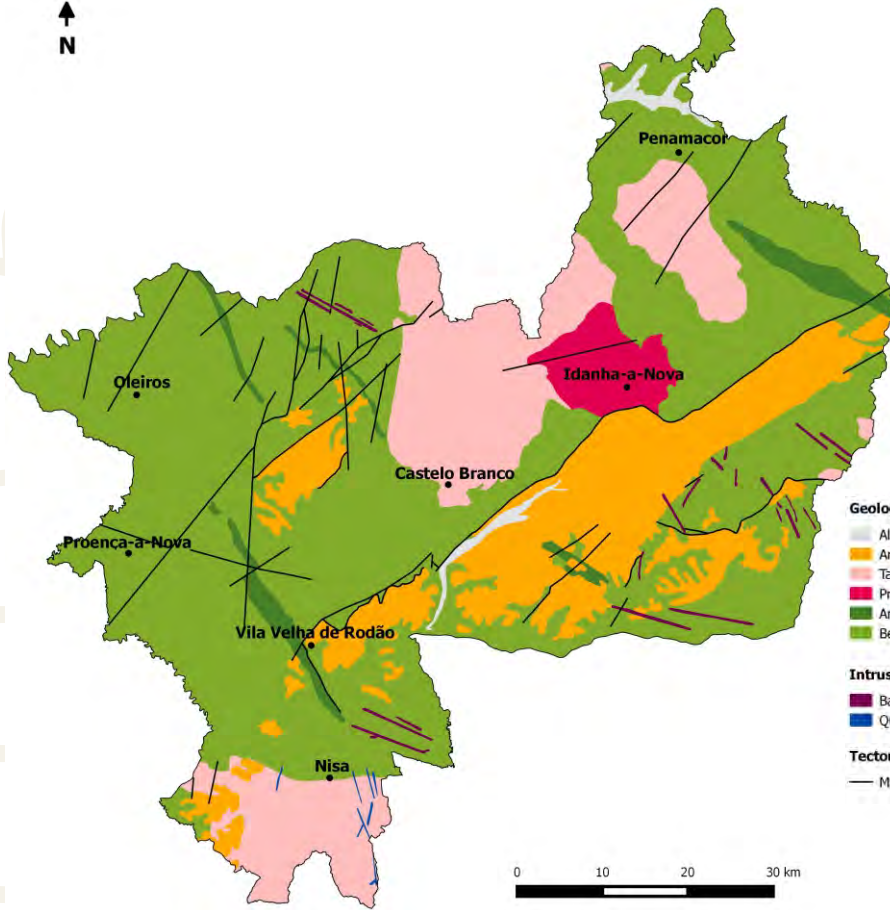
www.youtube.com/geoparknaturtejo



issuu.com/geoparknaturtejo

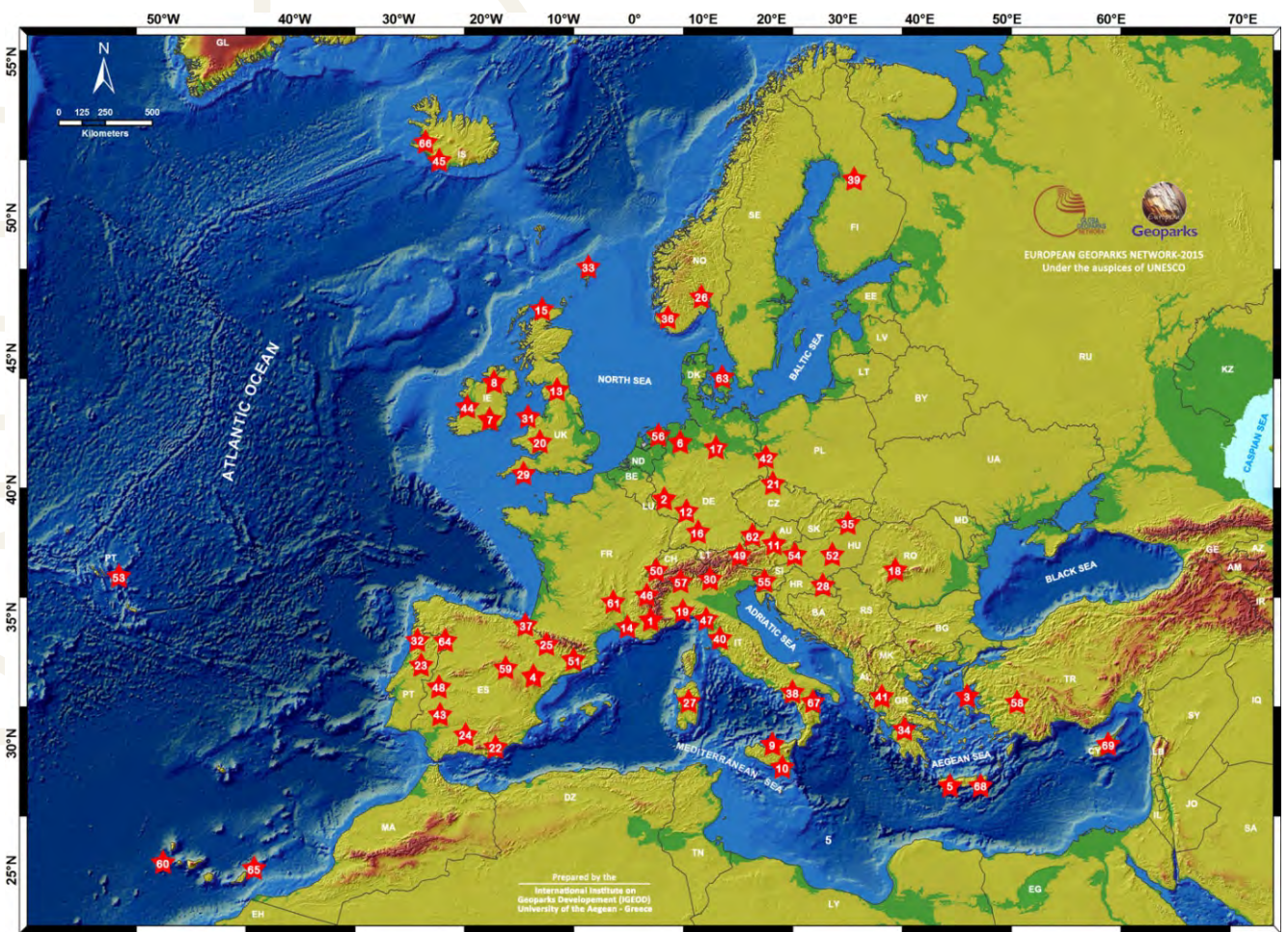


www.slideshare.net/geoparknaturtejomesetameridional



- 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, 2018
Coordination - Carlos Neto de Carvalho
Texts - Carlos Neto de Carvalho,
Joana Rodrigues, Manuela Catana
Photos - Joana Rodrigues,
Carlos Neto de Carvalho, Jesus Salazar
Clipping - Alice Marcelo e Carla Jacinto
Design - Layer [Design and Print Studio]
Translation - Carla Jacinto
Editing - Joana Rodrigues



CRUZIANA

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

www.geoparknaturtejo.com