



### **In this issue:**

IGCP Project "GEOfood for Sustainable Development in UNESCO Global Geoparks" approved

Participation in the international webinar "Geotourism in Geoparks as Sustainable Tourism Destinations"

UNESCO Global Geoparks at ITB NOW  
...and more!

# **CRUZIANA**

**NATURTEJO UNESCO GLOBAL GEOPARK - E-MAGAZINE**



# MONTHLY ACTIVITIES

**March - Destinature project - maps: Nature approved.** The project maps: Nature is a multidisciplinary programme of artistic creation that will travel through the natural territories of Sicó/Alvaiázere, Vale do Côa, Naturtejo Geopark, Vouga Caramulo, Serras da Estrela, Lousã, Gardunha, Aire e Candeeiros, Malcata and Açor. With a format specifically designed to take place outdoors, complying with the safety rules determined by the health authorities, the itinerant programme will extend over 10 weekends, close to classified natural and cultural heritage values of 12 municipalities.

These itineraries, with a large component of immersion in nature, will be stages of sharing with walks, music, visual arts, artistic residencies, performing arts and activities for children, youth, adult and senior public, connecting memories, places, landscapes and people.

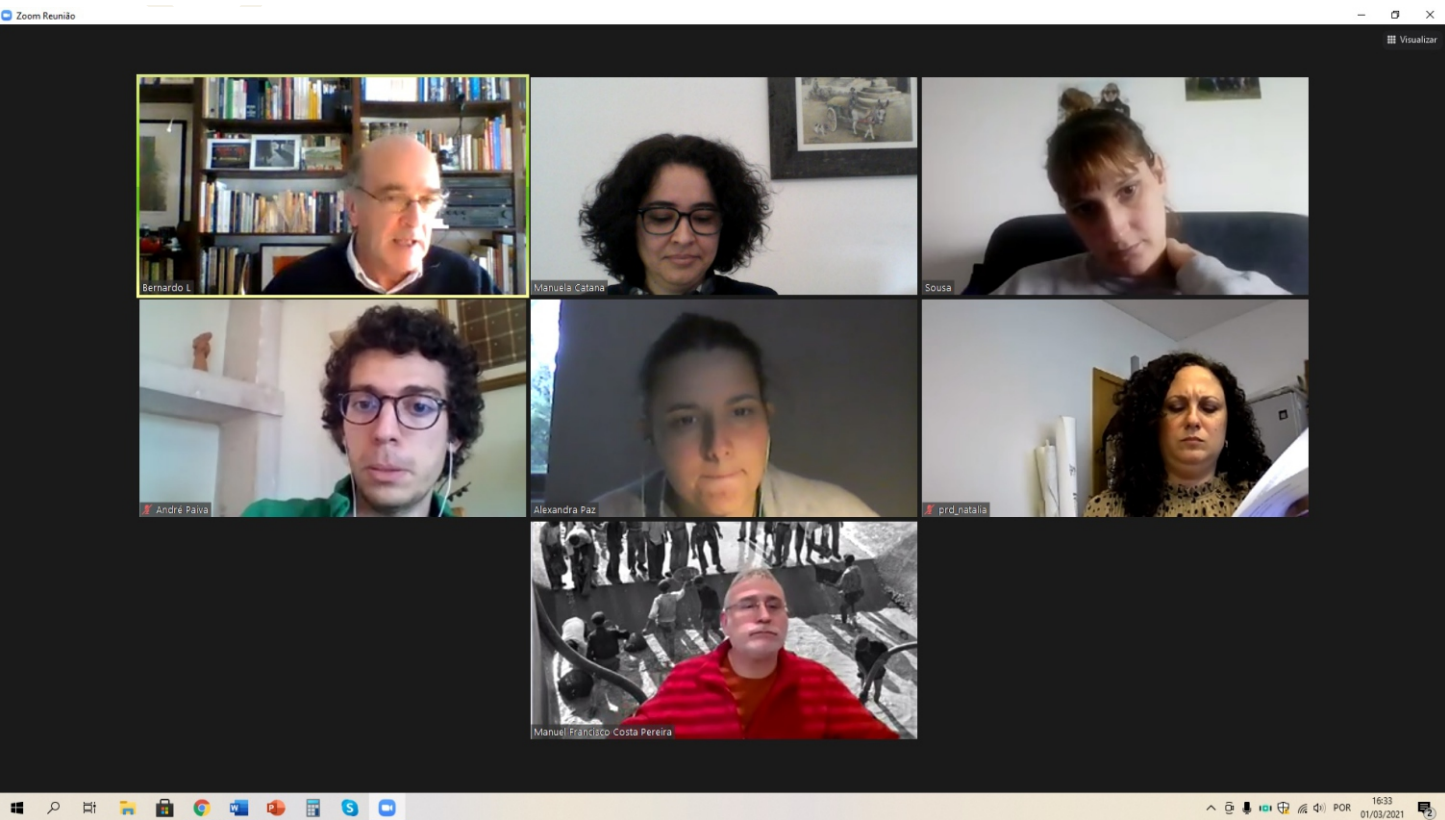
It is planned to take place in the territory of the Naturtejo UNESCO Global Geopark on 27, 28 and 29 August 2021.



## ESTÁGIOS

Escola Superior de Tecnologia IPCB  
Geopark Naturtejo Mundial da UNESCO

**March 1st - New IPCB trainees at Naturtejo.** Another edition of the curricular internships in Multimedia Products Development in the Naturtejo Geopark has just started. This year three students from the Superior Technical Professional Course of the Superior School of Technology of the Polytechnic Institute of Castelo Branco join the Geopark's team, guided by Professor Pedro Silva, for four months of practical training in a professional context.



**March 1st - Participation in the 2nd online meeting of the Working Group "Educational Activities - of the Guide of the Portuguese Geological and Mines Sites.** The meeting discussed the creation of a guiding document for the production of the future partners' Guide of Educational Activities for the School Year 2021/2022". The aim is to clarify the typology of activities and educational resources that partners should put in the new Guide. The topics to be included, some concepts and their definitions, among others, were discussed. In the meeting participated 7 representatives of the GPGMS partners that integrate the Working Group. Representing Naturtejo Geopark was Manuela Catana.

**March 2nd - New Geopark project in the Centre region.** Naturtejo Geopark was invited to share its experience as a UNESCO Global Geopark to the responsible of the municipalities of ADSAICA - Aire and Candeeiros Mountains Development Association. ADSAICA integrates the municipalities of Serras de Aire e Candeeiros Natural Park, Porto de Mós, Alcobça, Alcanena, Ourém, Rio Maior, Torres Novas and Santarém, that are currently evaluating the relevance of the development of a Geopark project in that territory. Armindo Jacinto, Naturtejo CEO, highlighted the motivations that led to the creation of Naturtejo Geopark, its impact in the territory, with a brief balance of the 15 years of work and the role of the Geopark in the regional development. He also discussed the obstacles to develop strategies and the medium and long term benefits. Joana Rodrigues addressed some of the main steps in the preparation of an application and the challenges arising from the protection and enhancement of the Geological Heritage, the delimitation of the area, the organization of a management structure and a strategy that involves several local agents, in a bottom up strategy.



**March 4th and 11th - Online Accredited Training Course "Geodiversity and Biodiversity of Naturtejo Geopark"**

**March 4th and 11th - Online Accredited Training Course "Geodiversity and Biodiversity of Naturtejo Geopark."**

The last two sessions of the training course for teachers organized by Naturtejo Geopark in partnership with the Living Science Forest Centre (Proença-a-Nova) took place, supported by the Training Centre of Alto Tejo Schools Association. The course trainers were Manuela Catana and Joana Rodrigues. At the last but one (penultimate) session initially planned as a Field Trip was adapted in an online format and the theme was "Biodiversity and Geodiversity of Portas de Almourão Geomonument". In the last session trainees presented the educational resources developed individually or in groups, such as: Field Trip Guides; Field Trip Plans; use of online tools for Virtual Field Trips; Summative or formative evaluation sheets; online forms to explore educational tools available on websites, among others. The teachers considered the course very useful, with a very pertinent theme to use in their daily teaching practice. The 21 teachers who attended the course belonged to the School Groups of Castelo Branco, Oleiros, Proença-a-Nova, Sertã and Vila de Rei.



**THE DIGITAL MEET-UP OF THE TRAVEL INDUSTRY**

Soft Opening: 8 March 2021  
Live Event: 9 - 12 March 2021  
Platform open until 31 May 2021

Be part of it NOW

**ITB BERLIN NOW**

Registration & Tickets: [itb.com/now](http://itb.com/now)

Platform: [itb-now.com](http://itb-now.com)

**March 9th to 12th - UNESCO Global Geoparks at ITB NOW.** The Global Geoparks Network participates again in the International Tourism Fair #ITBBerlinNOW, this year in digital format. The pandemic crisis made the Tourism sector rethink and #ITBBerlinNOW will be a space for sharing new strategies and business models for the recovery of the activity, with about 3200 exhibitors from 120 countries. UNESCO Global Geoparks, coordinated by the GGN Geotourism Working Group, promotes these innovative territories and sustainable tourism destinations until May 31st.

**March 9th - Partners Meeting of the Taejo Internacional Cross-border Project.** After a year of pandemic in which the activities were suspended, the first partners meeting of the Taejo International Cross-border Project took place. A review of the situation and planning of activities to be developed in 2021, the year in which this project ends, was carried out.



**UNESCO** United Nations Educational, Scientific and Cultural Organization

**UNEP** International Geoscience Programme

**IUGS** International Union of Geological Sciences

**GEO FOOD**

**IGCP 726** GEOfood for sustainable development in UNESCO Global Geoparks

*Trilobites*

**March 12th - Project "GEOfood for Sustainable Development in UNESCO Global Geoparks" approved.**

**March 12th - Project "GEOfood for Sustainable Development in UNESCO Global Geoparks" approved.** The UNESCO International Geosciences Programme (IGCP) approved the research project "GEOfood for the Sustainable Development in UNESCO Global Geoparks", of which Naturtejo Geopark is part of.

UNESCO is the only United Nations organization with a mandate to support research and qualification in the areas of Geology and Geophysics, through the ICGP, which annually calls for proposals in several specific areas. Framed under the theme "Geological Heritage for Sustainable Development", the project coordinated by the UNESCO Global Geoparks Magma (Norway), Hateg (Romania) and Naturtejo (Portugal), will run until 2026. The aim will be to study the link between Geological Heritage, Geodiversity, Ecosystem Services, food production and Sustainable Development, allowing establishing methodologies, procedures, guidelines and resources for the extended implementation of GEOfood.

The project now approved includes a team of 21 researchers from several UNESCO Global Geoparks, international Universities and Aspiring Geoparks, also involving all GEOfood members and partners, in 23 Geoparks from 14 countries.

In Portugal, GEOfood brand has been worked on jointly by the 5 UNESCO Global Geoparks Naturtejo, Arouca, Açores, Terras de Cavaleiros and Estrela supported by Tourism of Portugal, in an articulated nationwide strategy and will be one of the case studies and pilots of this project.

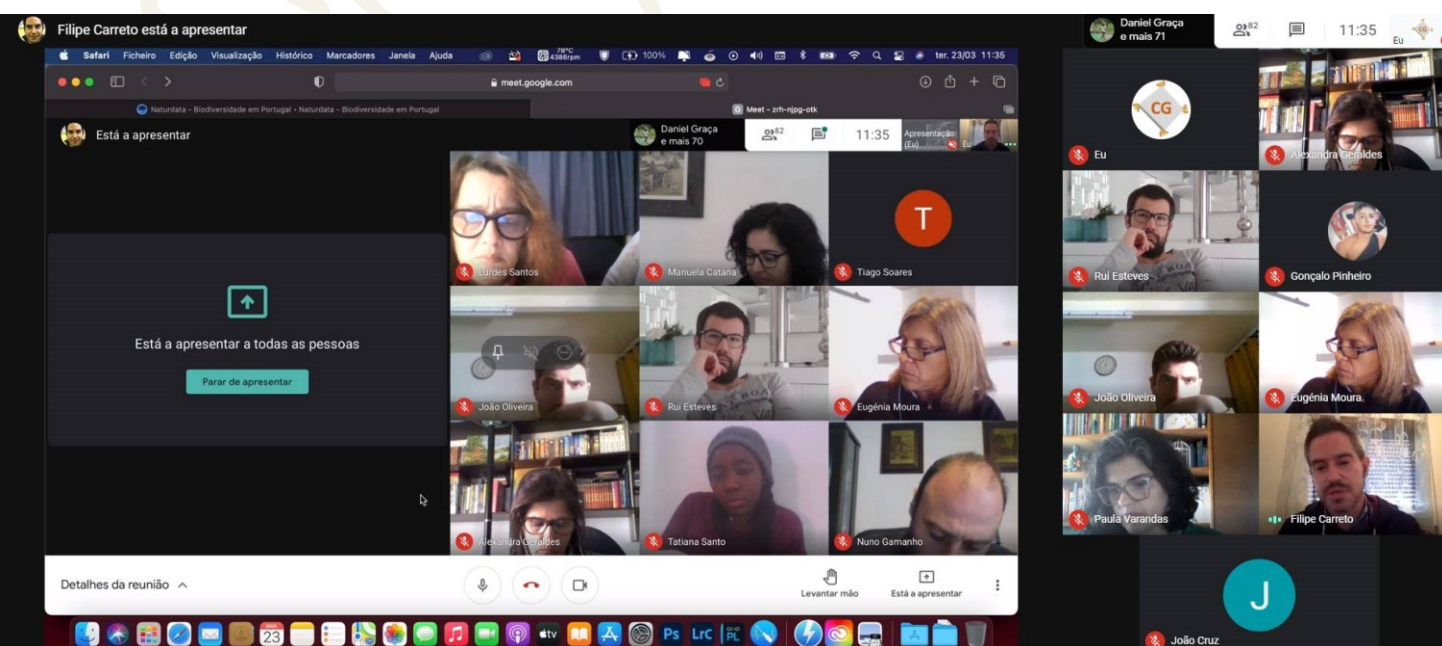
Of the 18 applications approved this year, the UNESCO International Geoscience Programme Council awarded GEOfood the "Special Prize".

**March 17th - Online Roundtable "Geodiversity & UNESCO Global Geoparks".** Naturtejo Geopark participated in the online Round Table "Geodiversity & UNESCO Global Geoparks" promoted in the scope of the 'II Latin America MCAA Conference' organized by Marie Curie Alumni Association.

The debate joined the UNESCO Global Geoparks Sesia Val Grande (Italy), Araripe (Brazil) and Naturtejo (Portugal), the Aspirant Geopark Caminhos dos Cânions do Sul (Brazil) and also the Canastra project (Brazil). Joana Rodrigues presented Naturtejo Geopark and the innovative strategies for sustainable development in the territory.

**March 17th - Meeting of the "Education" Working Group of UNESCO Geoparks - Portugal.** The theme for the meeting was the possible creation of a common educational programme to be held in the 5 UNESCO Global Geoparks, under the GEOfood brand/concept. In the meeting participated representatives from several Portuguese UNESCO Global Geoparks. Manuela Catana and Joana Rodrigues attended this meeting.

**March 22nd - Meeting with tour operators promoted by Tourism of Portugal.** An online meeting was held with several tourism operators, promoted by Tourism of Portugal. This meeting took place in the context of the Collaborative Networks under the motto Opportunity in the context of the Take Back Plan, to raise awareness of these agents for the opportunity that the inland tourism offers, namely those led by Collaborative Networks. A strong demand for inland destinations is expected, where holidays can be taken in a climate of relative social isolation and preference for natural spaces. Carla Jacinto represented Naturtejo Geopark.



**March 23rd - Webinar "EcoEprin - Looking Around for a Better Future" at Raia Professional School - Idanha-a-Nova.**

**March 23rd - Webinar "EcoEprin - Looking Around for a Better Future" at Raia Professional School - Idanha-a-Nova.** The Webinar was organised by Raia Professional School, in the scope of the Education Strategy for Citizenship. The activity took place during the morning and had two guest speakers: Manuela Catana and the amateur photographer Filipe Carreto. This was an awareness action where the importance of Environmental Education for Sustainability and the existing biodiversity in the municipality of Idanha-a-Nova were addressed, as well as the vision of nature through the testimony of a photographer. Manuela Catana presented the communication "Environmental Education for Sustainability and Biodiversity of Idanha-a-Nova's municipality". The webinar was attended by 80 students and teachers.

**March 29th - Webinar Geotourism in Geoparks as Sustainable Tourism Destinations - Chile.** The Kütralkura Geopark in Chile organised an international webinar to celebrate the Latin American Day of Geotourism. "Geotourism in Geoparks as Sustainable Tourism Destinations" was the theme that focused local, national, as the presence of the National Director of Tourism of Chile, as well as international attention. Two UNESCO geoparks spoke of their experience, Naturtejo Geopark, from Portugal, and Grutas del Palacio Geopark, from Uruguay. Carlos Neto de Carvalho as co-coordinator of the Geotourism Working Group of the Global Geoparks Network introduced the geoparks as innovative geotourism experiences.



**March 31st - Webinar "Work from... Centre of Portugal" organised by Tourism Centre of Portugal.** This webinar brought together several guests, among digital nomads, entrepreneurs and companies, to talk about the present and the future of working from home, while presenting the advantages that the Central region of Portugal offers to those who choose this territory to do so. As all participants referred, this trend is more and more present nowadays and is here to stay: the world changed forever. Naturtejo Geopark was represented by Carla Jacinto.

# IMPACT OF GEOPARK IN MEDIA



## TV & Radio

March 25th ((Ondacero – Spanish Radio) – Interview with Carlos Neto de Carvalho about Naturtejo Geopark on the occasion of the celebration of 5 years of the declaration of Crossborder Biosphere Reserve Tajo|Tejo International

## Newspapers & www

March (O Concelho de Vila Velha de Ródão) – Investment of 159 thousand Euros to restore habitats in Portas de Ródão

March (National Geographic Viagens) – Natural paradises in Portugal

March (Seletiva Magazine – Switzerland) – Naturtejo Geopark: 600 million years of stories to discover

March 2nd - (<https://althahbiah.com/>) – Project will take culture to the squares and villages of the Central region

March 2nd (Observador) - Project will take culture to the squares and villages of the Central region

March 3rd (The Portugal News) - Project "Maps: Nature" will take culture to the squares and villages of the Centro region

March 18th (Reconquista) - ICNF recovers and restores Portas de Ródão

March 19th (gazeta Rural) - International GEOfood brand recognised by UNESCO

March 21st (Diário Digital de Castelo Branco) – Naturtejo Geopark: GEOfood International Brand recognized by UNESCO

March 22nd (e-cultura.pt) – International GEOfood brand recognised by UNESCO

March 22nd (Beira Baixa TV) – Naturtejo Geopark: GEOfood International Brand recognized by UNESCO

March 25th (Reconquista) - Recognised by Unesco - GEOfood reinforces its role in food

March 31st (salamancartvaldia.es) - Portugal's five Global Geoparks and their relationship with the GEOfood movement

# SCIENTIFIC CONTRIBUTIONS FOR THE GEOPARK AND THE GEOSCIENCES



- BAUCON, A., NETO DE CARVALHO, C., FELLETTI, F., TOSADORI, G. & ANTONELLI, A. - Small-world dynamics drove Phanerozoic divergence of burrowing behaviors. *Geology*, <https://doi.org/10.1130/G48523.1>.

- PEREYRA, C. LAPRIDA, C., NETO DE CARVALHO, C., POMMARÉS, N., CORBAT, C. MONSALVO, S., LUENGO, M., PAREDES, G. CARDOSO, R., BERTERO, M. SESTO, F., FUCKS, E. - Paleoenvironmental Reconstruction of the Destacamento Río Salado Member, Canal de Las Escobas Formation (Middle Holocene), Northeastern Buenos Aires, Argentina: Sedimentological and Paleontological Evidence. In Bouza, P., Rabassa, J. & Bilmes, A. (Eds.), *Advances in Geomorphology and Quaternary Studies in Argentina*. Springer Earth System Sciences, 305-336.

- PEREIRA, S.N., COLMENAR, J.N., ESTEVES, C., DIAS DA SILVA, Í.N., PIRES, M. & NETO DE CARVALHO, C. - The Enigmatic Upper Ordovician of the Naturtejo UNESCO Global Geopark (Portugal). *Geoconservation Research*, 4 (1). <http://dx.doi.org/10.30486/gcr.2021.1913408.1053>.

- NETO DE CARVALHO, C. - Notícia sobre a descoberta de pegadas de dinossáurios no Jurássico da Praia de Pedrógão (Leiria). *Boletim do Centro Português de Geo-História e Pré-História*, 2(2), 11-16.

- NETO DE CARVALHO, C. - Redes de galerias de callianassídeos do tipo *Ophiomorpha nodosa* no Miocénico Superior da arriba da Praia da Galé-Fontainhas (Grândola). *Boletim do Centro Português de Geo-História e Pré-História*, 2(2), 43-48.

- NETO DE CARVALHO, C. & FRAÚSTO, S.P. - Uma pérola fóssil no Cenomaniano de Portugal. *Boletim do Centro Português de Geo-História e Pré-História*, 2(2), 55-58.

- NETO DE CARVALHO, C. & HAMILTON, T. - Património geomineiro a oeste da Serra das Talhadas (Vila Velha de Ródão): minerais excepcionais das antigas Minas dos Ingadanais e Sítio do Cobre. *Açafa On-line*, 13, 1-20.



## PROMOTION FOR THE GENERAL PUBLIC



- NETO DE CARVALHO, C. – Rota do Erges. Fronteira de Água. National Geographic Edição Especial Viagens, 66-67.
- NETO DE CARVALHO, C. – Rio Zêzere. A herança tectónica que se impõe nos meandros. National Geographic Edição Especial Viagens, 72-73.
- NETO DE CARVALHO, C. – Rota dos Fósseis de Penha Garcia. A diversificação da vida num oceano passado. National Geographic Edição Especial Viagens, 134-137.
- NETO DE CARVALHO, C. – Ilha do Pessegueiro. Escolhos de Histórias. National Geographic Edição Especial Viagens, 140-141.
- RODRIGUES, J. - Roteiro das Minas. Revista de Ciência Elementar, V9(1): 012. doi.org/10.24927/rce2021.012
- Blog post “Rodoliv - Olive oil from Naturtejo UNESCO Global Geopark”, [www.geofood.no/post/rodoliv-olive-oil-from-naturtejo-unesco-global-geopark](http://www.geofood.no/post/rodoliv-olive-oil-from-naturtejo-unesco-global-geopark)



# PROMOTION FOR THE GENERAL PUBLIC



16 abril 2021  
Encontro Nacional de Combate ao Abandono Geológico 1ª Edição

## Programa

moderadora – Andreia Nunes

10h00	Sessão de Abertura	
10h05	Sessão: A Relevância da Geologia em Portugal	Rui Dias (D. Geociências/ICT-UE) Pedro Proença e Cunha (DCT-FCTUC) Carlos Marques da Silva (GeoFCUL) Luís Azevedo Rodrigues (CCV Lagos)
11h00	Intervalo	
11h15	Mesa Redonda: À conversa com Entidades Dedicadas à Geoconservação em Portugal	Artur A. Sá (UTAD; Catedra UNESCO) Elizabeth Silva (UNESCO) Lia Mergulhão (ICNF) Paulo Pereira (ProGeo) Susana Machado (LNEG)
12h10	Almoço	
14h00	Mesa Redonda: Estado de Conservação do Património Geológico, Careque e Cabo Mondego	António Galopim de Carvalho (Prof. Catedrático Jubilado - FCUL) José Briha (UM-DCT) José C. Kullberg (Presidente da SGP) Maria Helena Henriques (DCT-FCTUC) Pedro Mocho (IDL-FCUL)
15h00	Intervalo	
15h15	Mesa Redonda: À Descoberta de Geoparques	Alexandra Paz (Arouca Geopark) Antónia Morais (© Terras de Cavaleiros) Carlos Neto de Carvalho (© Naturtejo) Cristina V. Pires (Aspiring G. Algarvensis) Emanuel de Castro (Estrela Geopark) João Nunes (Geoparque Açores) Nuno Pimentel (Aspiring G. Oeste)
16h15	Sessão de Encerramento	

## WEBINAR DÍA DEL GEOTURISMO

# Geoturismo en Geoparques como destinos de Turismo Sostenible

Por las redes sociales del Geoparque Kuttralkura

Lunes 29 de Marzo 18.00 hrs.

- Facebook live
- Canal Youtube
- Via zoom

**GEOTURISMO EN LA AGENDA PÚBLICA Y LOCAL**

- Andrea Wolleter (Directora Nacional de Sematur)
- Patricio Esparza (Director Regional de Corfo Araucanía)
- Julio Figueroa (Director Regional Conaf)
- Jorge Saquel (Alcalde Curacautín - Asociación de Municipalidades Cordilleras de la Araucanía)

**GEOTURISMO EN GEOPARQUES**

- Carlos Neto de Carvalho (Coordinador del Grupo de Geoturismo de la Red Mundial de Geoparques)
- Eugenio Bidondo y Diego Irazábal (Geoparque Mundial Unesco Grutas de Palácio)
- Héctor Benítez (Guía Local de Geoturismo)

PROGRAMA DE TRANSFERENCIA EDUCACION TURÍSTICA PARA EL ECOSISTEMA DEL GEOPARQUE KUTTRALKURA

Día Latinoamericano del GEOTURISMO

# ROCHAS E MINERAIS

## CENTRO CIÊNCIA VIVA DA FLORESTA

22 ABRIL  
31 AGOSTO  
2021

## MINAS E GEOLOGIA NORTE DE PORTUGAL

PORTO E NORTE

Com o apoio dos Municípios: Arouca, Beja, Barcelos, Barcelos de Cavaleiros, Marco de Canaveses, Matosinhos, Montalegre, Paredes, Porto, Ribeira de Pena, Torre de Moncorvo, Vairão, Vila Pova de Aguiar, Vila Real, Vila do Castelo, Vimeiro

# PrimaveraPlanetaria

Earth Day - Giornata della Terra - Día de la Tierra  
22.04.2021  
transcontinental meeting

## “365 giorni di PrimaveraPlanetaria”

la comunità si racconta per immaginare nuove azioni

institutional greetings:

Yeray Gutiérrez Pérez Luis (Alcalde Ayuntamiento de La Laguna);  
Muñoz Álvarez Rubén (Presidente Municipal H.XVI Ayuntamiento de La Paz, BCS);  
Ricci Laura (Direttore dip. PDTA - Sapienza Roma).

speaker (scheduling by time zone):

Jie Zhao; Ambra Cannistraro; Federico Battistini; Juan Ignacio Mascotena; German Luis Pizarro; Garrie Vincenti;  
Ana Lagidze; Marco Vigliotti; Roberta Trenti; Gloria Mazzamati; José Juan Cano Delgado; Francesco Salomone Suárez;  
Carlos Neto de Carvalho; Innocente Cutzán; Javier Galtán-Morán; Lourdes Gonzales Corona;

discussant:

Massimo Venturi Ferriolo; Rossana Galdini; José Garcia Casanova;  
Eleonora Gregorio; Emanuele von Normann; Antonella Mignacca.

moderator:

Maria Elisabetta Cattaruzza; Carlo Valorani.

zoom ID: 856 3601 5282 Passcode: 181882

texts translation: www.leaflab.it/abstract  
live streaming: www.facebook.com/LeafLabCommunity

# PROMOTION FOR THE GENERAL PUBLIC



## Campanha de Verão

4 a 31 de julho de 2021

Excavações Arqueológicas  
Campo 1: Bateria das Batarrias I  
4 a 17 de julho  
Campo 2: Capela Velha do Peral  
12 a 24 de julho  
Campo 3: Sepultura megalítica a identificar  
19 a 31 de julho

Exposição de materiais arqueológicos  
19 e 31 de julho

Proença-a-Nova: Arqueologia e Património Construído  
24 de julho, apresentação do livro

Conferências  
14 e 21 de julho

Visita de Estudo  
18 de julho

Jantar em aldeia de xisto  
15 e 22 de julho

Contactos para informações:  
+351 939 127 478 (Câmara Municipal)  
altotejo@gmail.com  
archaeologicalfieldcamps-portugal.pt



## 2021

Proença-a-Nova International Archaeological Field Camp

# Campo Arqueológico de Proença-a-Nova

## Portugal



Fotografia de Mário Montenegro. Visita da Bateria das Batarrias I no decorrer da campanha de 2019.

## Visit Naturtejo Geopark in:



[www.geoparknaturtejo.com](http://www.geoparknaturtejo.com)



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[www.youtube.com/geoparknaturtejo](https://www.youtube.com/geoparknaturtejo)



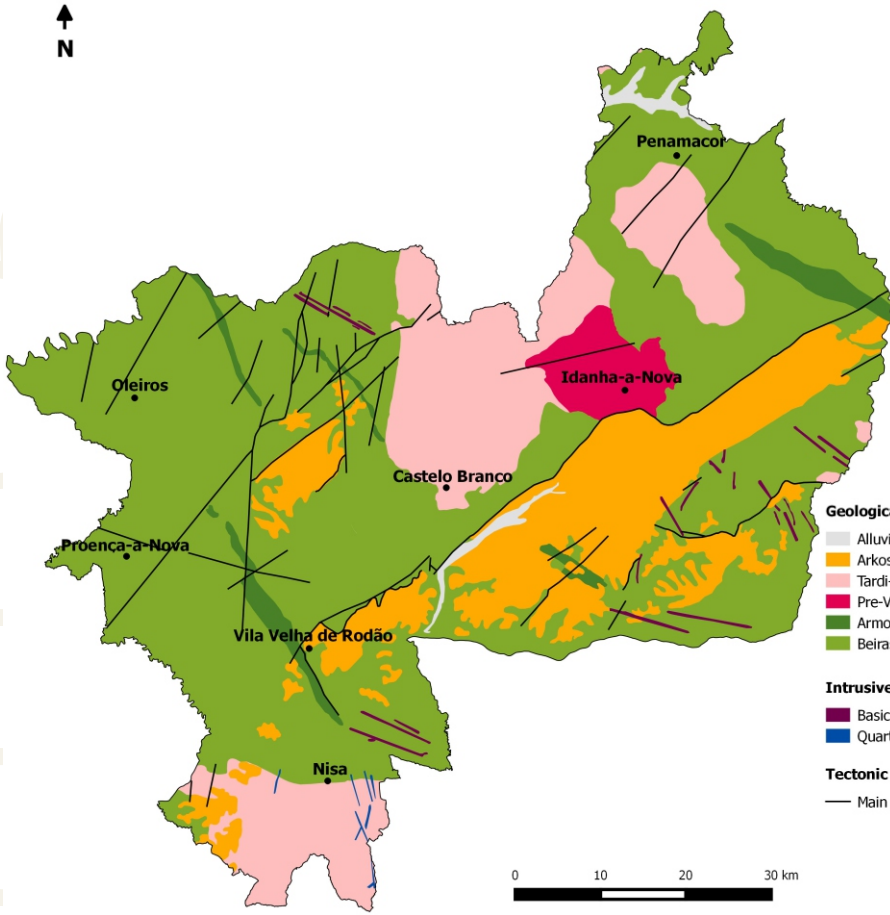
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**Geological Formations (Ma-Million years)**

- 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)

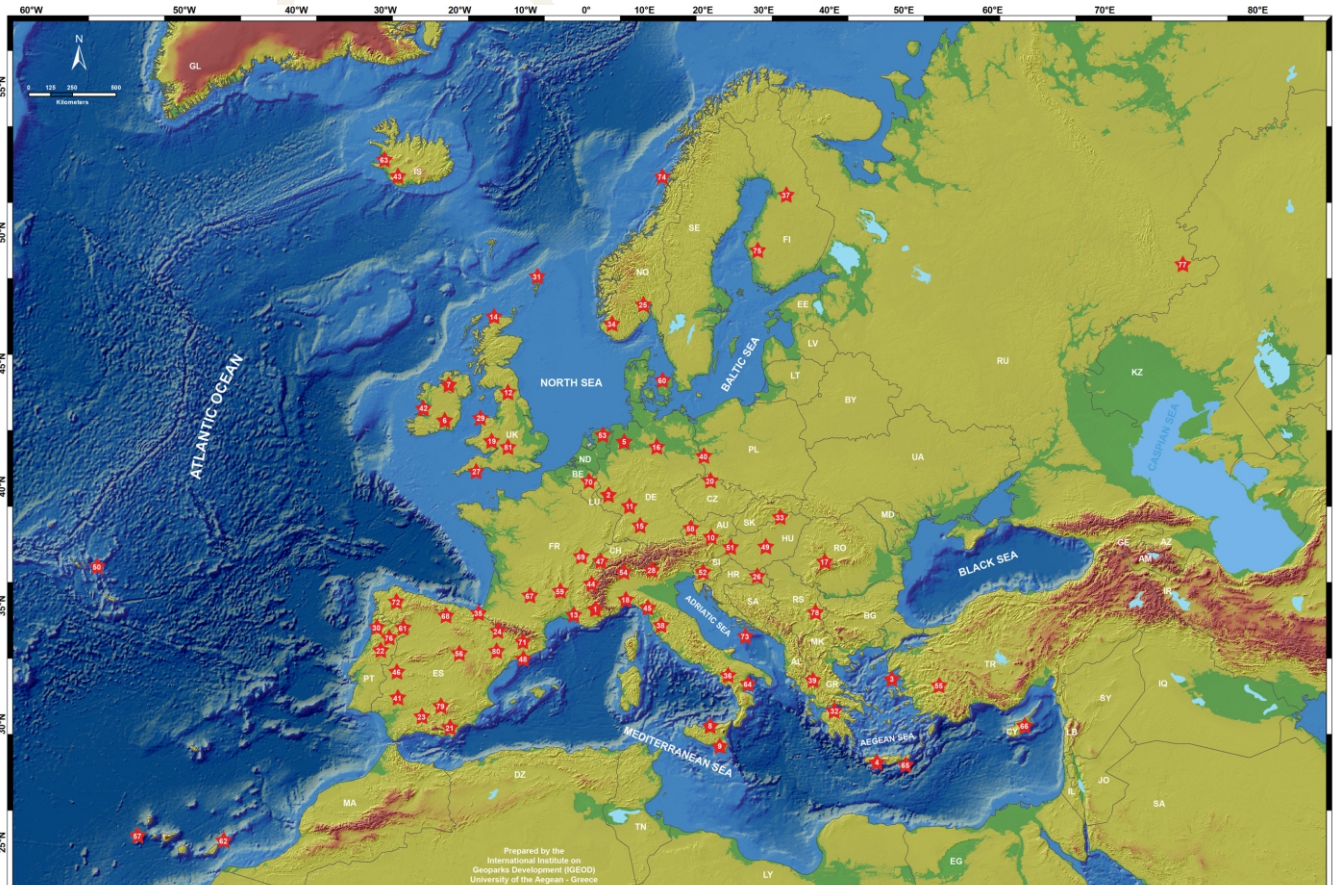
**Intrusive rocks**

- Basic rocks, aplites and pegmatites
- Quartz

**Tectonic**

- Main faults

**Geoparks: Geology with human face**





Edition - **Geopark Naturtejo**, 2021  
Coordination - **Carlos Neto de Carvalho**  
Texts - **Manuela Catana, Joana Rodrigues,  
Carla Jacinto, Carlos Neto de Carvalho**  
Photos - **Manuela Catana**  
Clipping - **Carla Jacinto e Alice Marcelo**  
Design - **Layer [Design and Print Studio]**  
Editing - **Joana Rodrigues**



**CRUZIANA**

GEOPARK NATURTEJO DA MESETA MERIDIONAL EUROPEAN AND GLOBAL GEOPARK MONTHLY REPORT

[www.geoparknaturtejo.com](http://www.geoparknaturtejo.com)

**NATURTEJO UNESCO GLOBAL GEOPARK - E-MAGAZINE**