



In this issue:

International Earth Day Celebrations
Ichnological Park of Penha Garcia: from Science to its dissemination
Training Course "The Museum and the School: New Challenges/New
Practices

...and more!

CRUZIANA

NATURTEJO UNESCO GLOBAL GEOPARK - E-MAGAZINE



MONTHLY ACTIVITIES



ESTÁGIO

IPC Escola Superior de Educação de Coimbra
Licenciatura em Turismo
Geopark Naturtejo Mundial da UNESCO

April 1st - New traineeship in tourism at Naturtejo. Naturtejo Geopark hosts a curricular internship on Tourism from Coimbra School of Education, in an extremely demanding time for the Tourism sector, one of the most affected by the pandemic. It will be 3 months of practical training in a professional context, with special attention to the current challenges of the sector and the recovery of the tourism activity.

April 5th - Participation in the 3rd online meeting of the Working Group "Educational Resources - of the " Guide of the Portuguese Geological and Mines Sites (RMPIGP)". The meeting analysed and discussed the preliminary version of the guiding document for the future "Partners' Guide of Educational Activities for the School Year 2021/2022". The corrected version of the document will be sent for analysis to all RMPIGP partners, still during April. In this meeting participated 9 representatives of the RMPIGP partners that integrate the Working Group "Educational Resources". Representing Naturtejo Geopark was Manuela Catana.

April 6th - Meeting of the "Education" working group of UNESCO Global Geoparks - Portugal. In the meeting were discussed some possible themes, contents and structure of the common educational programme to be held in the 5 UNESCO Global Geoparks, under the GEOfood brand/concept. The meeting was attended by representatives from several Portuguese UNESCO World Geoparks. Manuela Catana represented the Geopark in this meeting.



April 8th - Partners meeting of the Cross-Border Project EUROACE Sport . In this partners meeting of the Cross-Border Project EUROACE Sport was made a status report and also planning activities to be developed in 2021, year in which this project ends. Carla Jacinto represented Naturtejo Geopark.



April 10th - Lecture for Teachers of the Central Region Union, at the Cultural Forum of Idanha-a-Nova. In the scope of a training action organized by the Centre Region Teachers Union, Manuela Catana was invited to deliver the lecture " Naturtejo UNESCO Global Geopark " to share its heritage, with emphasis on the natural heritage. The Educational Programs were also disclosed. This activity was attended by 13 teachers.

- What is a Geoproduct?
- Which are the goals of the label?
- Who can join Geoproduct brand?
- Which are the main requirements?
- What are the Geoproducer's commitments?



<https://naturtejo.com/conteudo.php?opt=o-que-fazer&id=101>

April 13th - 4th Digital Forum of the European Geoparks Network. The 4th Digital Forum of Geoparks, involved 81 territories from 26 European countries. With the participation of the EGN Coordination Commission, of which Carlos Neto de Carvalho is the representative of Naturtejo UNESCO Global Geopark, this forum presented the latest news from the Global Geoparks Network and UNESCO. There was also a thematic session on partners networks and quality rules, in which Naturtejo Geopark was invited to give its example. Thus, Joana Rodrigues detailed the development of geoproducts and its importance to qualify the destination Naturtejo Geopark.



April 13th - Workshop and field trip in the scope of the project "Stones, small stones and gravel" for Penha Garcia kindergarten and primary school students. The project's theme was proposed by the kindergarten and primary school teachers. In the morning a small field trip took place using part of the Fossils Trail, inside the village. They went from the school to Largo do Pelourinho. During the trail they observed and identified rocks used in the houses and monuments of the village (quartzite, schist and granite). The Workshop took place in the afternoon in which Naturtejo Geopark LithoLibrary (rock collection) was presented. The students were divided in groups to observe and analyze the properties of 5 rocks and one mineral existing in Naturtejo Geopark. They verified some examples of rock applications in everyday life. The teaching methodology used was the interactive groups. The activities were organized by Manuela Catana in collaboration with the educator and the teachers of EB1 of Penha Garcia, as well as a Natural Sciences teacher from EB2,3/Secondary School José Silvestre Ribeiro.

April 15th – Meeting Tourism of Portugal - Collaborative Networks. Naturtejo Geopark participated in a set of work sessions between travel agencies, tour operators and collaborative networks promoted by Tourism of Portugal. This group of Collaborative Networks is composed by Naturtejo Geopark, Romanesque Route, Mountain Villages, Schist Villages, Historical Villages of Portugal, Heritage of Alentejo, Places of the Alentejo Mountain, Magic Mountains, Terra Fria Transmontana Route, Vicentine Route and Thermal Spa of the Centre. These meetings aim to promote the dissemination between touristic agents, through the presentation of the touristic offer in the territory. On the 5th, 6th and 7th of May there will be a new round of meetings between partners and retailers of APAVT. Naturtejo Geopark was represented by Carla Jacinto.

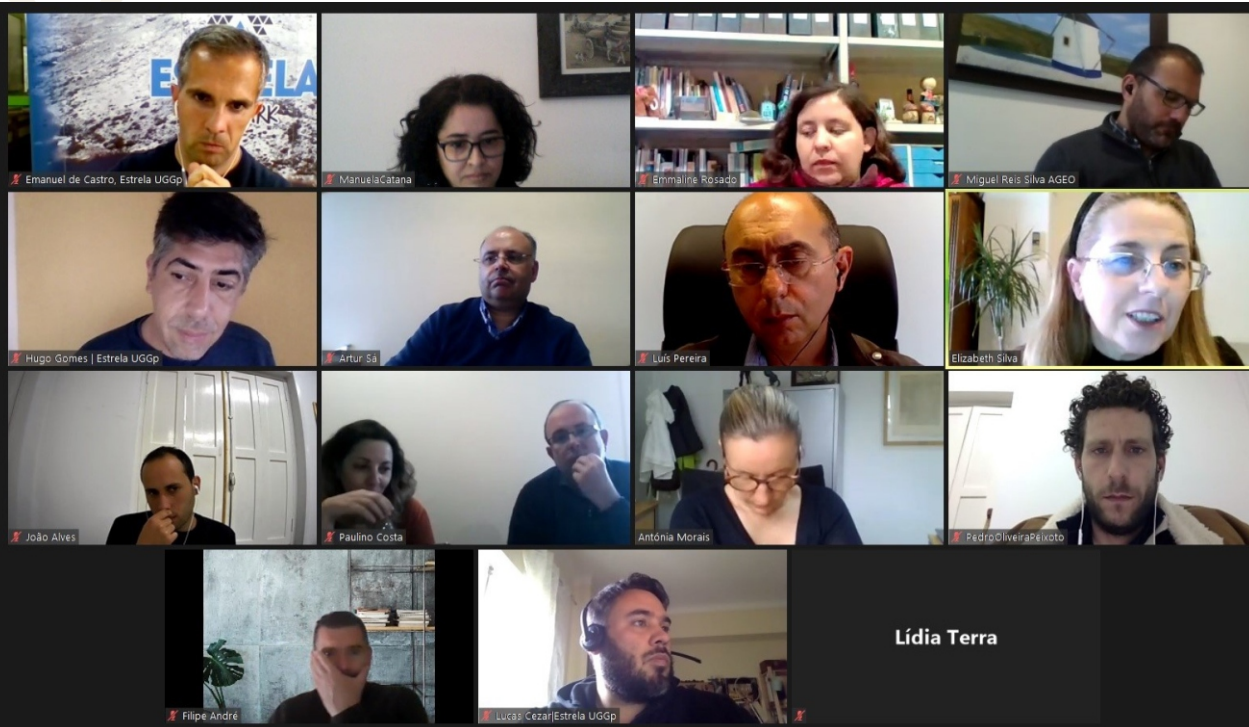
April 16th - National Meeting "Tackling Geological Abandonment". The association of Geology students from the University of Coimbra organised a webinar where they gathered the main personalities that have been dedicated to geoconservation in Portugal. In this well attended event they discussed the protection and enhancement of the Portuguese geological heritage. Carlos Neto de Carvalho was invited to participate in the session on Portuguese geoparks and to present the main values of this territory recognized by UNESCO.



April 17th - Training Course "The Museum and the School (New Challenges/New Practices) of the Union of Teachers of the Central Region. A group of teachers from Castelo Branco district visited Naturtejo Geopark, in the scope of the Training Course "The Museum and the School (New Challenges/New Practices)", promoted by the Union of Teachers of the Central Region and promoted by the trainer António Pires.

The course included a walk along the Fossils Trail, in Penha Garcia, a visit to Senhora da Azenha Hermitage, Bodo de Monfortinho, Termas de Monfortinho and Salvaterra do Extremo. This field trip, guided by the anthropologist Eddy Chambino and the geologist Joana Rodrigues, focused on the interpretation of the landscape and the themes of smuggling, mining and popular religiosity.

April 18th - International Monuments Day with the presentation of a new site with dinosaur footprints in Portugal. The International Day of Monuments and Sites was celebrated at the National Museum of Natural History and Science in Lisboa with a lecture given by palaeontologist Silvério Figueiredo on a new site with dinosaur footprints recently published in a scientific journal. Carlos Neto de Carvalho, co-author of the work, was among the guests of this researcher to talk about the palaeontological record of invertebrates in Boca do Chapim and Areia de Mastro formations.



April 21st - Meeting within the scope of the Project "Biennium for Climate Action in Portuguese Geoparks (2021-2022). The meeting focused mainly on the launch event of the Biennium for Climate Action, which will consist of an opening Webinar to be held in the European Geoparks Week. Sixteen representatives from the five Portuguese UNESCO Global Geoparks and from Aspiring Geoparks participated in this work meeting. Manuela Catana represented Naturtejo Geopark.



April 22nd - Lecture and Field Trip as part of the celebration of World Earth Day and National Geological Heritage Day. The World Earth Day and National Geological Heritage Day was celebrated by 57 students and 4 teachers of the José Silvestre Ribeiro School Group, of Idanha-a-Nova. In the morning a lecture: "Environmental Education for Sustainability & Biodiversity of the municipality of Idanha-a-Nova" took place for the students of an 8th grade class. In the afternoon, there was a field trip: "Biodiversity and Geodiversity in Tapada do Sobral, in Idanha-a-Nova". It was also a day to remember the actions and projects of environmental education and improvement carried out in the previous school year by the school community, with the symbolic delivery of the Green Flag of the Eco-Schools Programme, referring to the school year 2019/2020. The projects were streamlined with several partners, including Naturtejo Geopark and the Municipality of Idanha-a-Nova. This was a happy day, when we celebrated our admirable Mother Earth, in Tapada do Sobral, and joined the party besides the rocks and plants, a white stork, a griffon vulture, bee-eaters, sparrows, swallows, butterflies and even a beetle! The talk and field trip were boosted by Manuela Catana.



April 22nd - New exhibition at the Living Science Forest Centre shows rocks from the North of Portugal. The Living Science Forest Centre, in Proença-a-Nova, and Naturtejo UNESCO Global Geopark marked the World Earth Day and the National Geological Heritage Day with the opening of the exhibition 'Rocks and Minerals - Northern Portugal'.

This travelling exhibition was created in 2016 by the Northern Region Partners of the Guide of the Portuguese Geological and Mines Sites, under the initiative of Vila Pouca de Aguiar Municipality and supported by Tourism of Porto and North of Portugal. Since that year it has been visiting dozens of places in the North and now also in the Centre of the country. Aiming to share the rocks and minerals of the Northern Portugal, this collection presents a little of the Geodiversity, the geological history and the mining past of that region.

This exhibition now arrives at the Living Science Forest Centre, in the middle of Naturtejo UNESCO Global Geopark, a region with important geomonuments, such as Portas de Almourão or Miradouro Geomorfológico das Corgas, and with a strong mining tradition that dates back to the Roman period, in the margins of the Ocreza river. The most recent Partners of the Northern region Mines Route were integrated in this exhibition, with new specimens from the Argozelo Mines, in Vimioso and from the Viana do Castelo Littoral Geopark, as well as fossils from Sobral Fernando region (Proença-a-Nova).

The opening was marked with an activity "Meeting with the Scientist" for 1st cycle students of the Living Science School. In the first part, the 4th grade class of EB São Nuno de Santa Maria, from Cernache do Bonjardim, got to know Geology better, the working methods of the Geologist and the importance of his work in everyday life. Students brought the most diverse doubts about Geology and the great scientific discoveries in this area. In the second part, the class explored the 'Rocks and Minerals - North of Portugal' exhibition, through a challenge that led them to discover all the curiosities of this exhibition.

April 22nd - Trans-continental meeting PrimaveraPlanetaria. PrimaveraPlanetaria is an international project that promotes sustainability awareness through the development of micro-gardens. One year after the launch of this initiative, the International Earth Day was the moment to make an update with the current partners, which extend from New Mexico to Rome and Australia, passing through Toulões in Naturtejo UNESCO Global Geopark. In this transcontinental webinar, Carlos Neto de Carvalho presented the ideas, but also the difficulties of developing such a project in the context of the Toulões strategy - the Peony Village in Portugal.

April 22nd - I Cycle of Webinars on aspiring Portuguese UNESCO Global Geoparks. It's taking place the I Cycle of Webinars about the Portuguese UNESCO Global Geoparks aspirants, organized by UNESCO National Commission and the West Aspiring Geopark. This initiative aims to present the various application projects underway in the country.

The first webinar took place on World Earth Day and was dedicated to the West Aspiring Geopark, a project that includes the municipalities of Bombarral, Cadaval, Caldas da Rainha, Lourinhã, Peniche and Torres Vedras. Representatives from the 5 Portuguese UNESCO Global Geoparks participated in a debate where it was discussed the importance of networking in these territories. Naturtejo Geopark was represented by Joana Rodrigues.

April 30th - The Ichnological Park of Penha Garcia as an example in the annual congress of the European Geological Union.

Andrea Baucon, researcher from the University of Genoa in Italy represented Naturtejo Geopark in the EGU2021 General Assembly. In one of the most important international geology scientific meetings, that this year took place online, Andrea Baucon presented the communication "An ichnological predictive map of the Jezero Crater, Mars: searching for potential traces of life-substrate interactions based on terrestrial analogues (Liguria, Italy; Naturtejo UNESCO Geopark, Portugal; Ômnôgov, Mongolia)". This work, which aims to compare examples of the palaeontological record of selected regions, of which the Ichnological Park of Penha Garcia stands out, presents a methodology that increases the probability of the mission to the Jezero Crater on Mars finding fossilised evidence of past life in the geological units present there.

IMPACT OF GEOPARK IN MEDIA



TV & Radio

- April 17th (RTP1 programa "Aqui Portugal") – Ichnological Park of Penha Garcia
- April 20th (TSF Rádio "Terra a Terra") – Interview with Carlos Neto de Carvalho about the Geodiversity of the Ichnological Park of Penha Garcia

Newspapers & www

- April 7th (Gazeta do Interior) – International GEOfood brand recognised by UNESCO
- April 20th (TSF online)– The landscape before the man. Portugal is an "epicentre" of worldwide geological importance
- April 21st (Figueiranahora.com) – Six municipalities in Centre Portugal sign agreement to create Atlantic Geopark
- April 23rd (Agricultura e Mar Actual) – Proença-a-Nova: Living Science Forest Centre opens a travelling exhibition about rocks and minerals from the North of Portugal
- April 23rd (Imediato-Jornal Regional) – Romanesque Route participates in a project of Tourism of Portugal - To encourage knowledge between tourism actors
- April 24th (MédioTejo.net) – Rotas de Mação Association joins Microsoft's philanthropy programme
- April 24th (Brytfmonline) – Proença-a-Nova: Living Science Forest Centre opened the travelling exhibition of rocks and minerals in northern Portugal
- April 26th (Verdadeiro Olhar) – Romanesque Route participates in a project of Tourism of Portugal
- April 26th (Global News Portugal) – The return of tourism to Beira Baixa is being carefully and attentively planned
- April 26th (Jornal de Oleiros) – Proença: Living Science Forest Centre opens exhibition
- April 29th (Reconquista) – In Zebro, Oleiros - Siza Vieira viewpoint is of public interest
- April 29th (Reconquista) – Living Science: New exhibition on Earth Day

SCIENTIFIC CONTRIBUTIONS FOR THE GEOPARK AND THE GEOSCIENCES



- PEREIRA, S.N., COLMENAR, J.N., ESTEVES, C., DIAS DA SILVA, Í.N., PIRES, M. & NETO DE CARVALHO, C. - Paleobiodiversity in the Darriwilian (Middle Ordovician) of the Naturtejo UNESCO Global Geopark (Portugal). *Geoconservation Research*, 4(1). DOI: 10.30486/gcr.2020.1913411.1054.

- BAUCON, A., NETO DE CARVALHO, C., BRIGUGLIO, A., FELLETTI, F., PIAZZA, M. - An ichnological predictive map of the Jezero Crater, Mars: searching for potential traces of life-substrate interactions based on terrestrial analogues (Liguria, Italy; Naturtejo UNESCO Geopark, Portugal; Ômnôgov, Mongolia), EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-9051, <https://doi.org/10.5194/egusphere-egu21-9051>, 2021.

- NETO DE CARVALHO, C. - Toulões “the Peony Village of Portugal” and the community-based project PrimaveraPlanetaria. Transcontinental meeting “365 giorni di PrimaveraPlanetaria” the community talks about itself to plan new actions, 22nd April.

PROMOTION FOR THE GENERAL PUBLIC



- NETO DE CARVALHO, C. & PIRES, J.M. – From a geotechnical potential hazard to an innovative interpretation tool: the active Ponsul Fault. European Geoparks Magazine, 18, 42.

III ENCONTRO POTIGUAR GEOPARQUE SERIDÓ
 Turismo e Produção Associada: Dinâmicas Locais e Cenários Globais

PROGRAMAÇÃO
1º DIA | 06/05 | QUINTA-FEIRA

09:00 - 09:30 | Mesa de Abertura
 ALEXANDRO TEIXEIRA GOMES
 Diretor da Faculdade de Engenharia, Letras e Artes do Seridó (FELCS/UFRN)
 ANA MARIA DA COSTA
 Secretária de Estado do Turismo do RN
 CRISTO AURELIO CÂMARA DE MELLO VIANA
 Pró-reitor de Extensão da UFRN
 BRUNO REIS
 Presidente da ESPROTOS
 GREGO OLIVEIRA DE SOUZA JUNIOR
 Presidente do Conselho Público Internacional do Geoparque Seridó
 CLEDO JOSÉ VIEIRA DE MOURA
 Chefe do Escritório Regional do SERIDÓ/RN Seridó Oriental – Cursos Novos
 MARCELO FERREIRA
 Professor de Curso de Turismo da FELCS/UFRN e Coordenador Geral do Evento
 MARIANO NASCIMENTO
 Coordenador do Comitê Científico do Geoparque Seridó e Coordenador Geral do Evento

09:30 - 09:40 | Apresentação Cultural
 ANDRÉIA DOS VITÓRIOS
 Coordenadora de Cursos Novos

09:40 - 11:40 | PT1 - Geoparque Aspirante Seridó: Dinâmicas locais e cenários globais
 MARIANO NASCIMENTO
 Coordenador do Comitê Científico do Geoparque Seridó e Coordenador Geral do Evento
 FRANCISCA FRANCES REGINA DE FREITAS DE ARAÚJO
 Universidade Regional do Cariri (URCA) - Geopark Anápolis - Brasil
 RAFAEL CARLOS GOMES SOARES
 Geopark Anápolis - Portugal
 GABRIEL RODRIGUES
 Geopark Sintra - Portugal
 JÚLIA CAROLINE FERRO
 Associação de Desenvolvimento Rural e Integrado das Serras de Montemor, Évora e Cidreira (ADEMORCA) - Portugal

14:00 - 14:10 | Apresentação Cultural
 GRUPO DE DANÇA ORFÈUM
 Apoio de atividades da Pró-Reitoria de Extensão da UFRN com alunos e comunidade externa, sob a coordenação do professor Evandro Halysen Dantas Pereira

14:10 - 15:30 | PT2 - Turismo e produção associada no Seridó Potiguar
 MARCELO FERREIRA
 Professor de Curso de Turismo da FELCS/UFRN e Coordenador Geral do Evento
 ROBERTO CARNEIRO DA SILVA
 Diretor Público e Artista Plástico (Azeit) - Geopark Anápolis - Portugal
 RAFAEL DE ARAÚJO MOURA
 Agricultura e turismo da Associação de Desenvolvimento do Povoado Barra (Pantufa)
 SARAINE DE LOPES DE ARAÚJO
 Turismo local da ESPROTOS e Guia de Turismo Regional (Cursos Novos)
 VANESSA MEDeiros
 Artesã (Cursos Novos)

06/05 | QUINTA-FEIRA | MANHÃ
 LINK DO EVENTO NO YOUTUBE
<https://youtu.be/G8D0zYU15tE>

06/05 | QUINTA-FEIRA | TARDE
 LINK DO EVENTO NO YOUTUBE
<https://youtu.be/Z8llw6OxO1c>

EXPOSIÇÃO
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: Amora, Barral, Gondomar, Souselas de Castromil, Marco de Canaveses, Matosinhos, Marinhago, Paredos, Póvoa, Ribeira de Pena, Torre de Moncorvo, Valongo, Vila Flor, Vila de Aguiar, Vila Real, Viana do Castelo, Vimeiro

I CICLO DE WEBINARS
 aspirantes a Geoparques Mundiais da UNESCO Portugueses

17 MAIO Dia Mundial das Telecomunicações e da Sociedade de Informação

PROGRAMAÇÃO

16:00h - 16:15h | **Abertura:**
 Comissão Nacional da UNESCO/ aspirante Geoparque Oeste

16:15h - 16:45h | **Apresentação | Aspirante Geoparque Litoral Viana do Castelo**
 (projeto de candidatura/ relevância científica)
Oradores:
 Ricardo Carvalho – Aspirante Geoparque Litoral Viana do Castelo

16:45h - 17:45h | **Mesa-redonda | Os Geoparques como promotores de um destino turístico em tempos de pandemia**
Convidado especial: Pedro Machado – Presidente da Entidade Regional de Turismo do Centro de Portugal
Convidado especial: Miguel Castro Neto – Professor Auxiliar e Subdirector da NOVA Information Management School (NOVA IMS), Universidade Nova de Lisboa.

17:45h - 18:15h | **Convidados**
 Representantes de cada um dos cinco Geoparques Mundiais da UNESCO Portugueses
Debate

moderador:
 aspirante Geoparque Oeste

Comissão Nacional da UNESCO Portugal
 Organização Portuguesa para a UNESCO
 GEOPARQUE OESTE

Apoio Institucional:

PROMOTION FOR THE GENERAL PUBLIC



**18 abr
2021**

Dia Internacional dos Monumentos e Sítios

MUHNAC
UNIVERSIDADE
DE LISBOA

**Público
geral**

museus.ulisboa.pt

**Participação através
da plataforma ZOOM**

Campanha de Verão

4 a 31 de julho de 2021

Excavações Arqueológicas
 Campo 1. Bateria das Baterias 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)
altojejo@gmail.com
archaeologicalfieldcamps-portugal.pt

2021 Campo Arqueológico de Proença-a-Nova Portugal

Fotografia de Mário Moradas, Vista da Bateria das Baterias I no decorrer da campanha de 2019.

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www.youtube.com/geoparknaturtejo



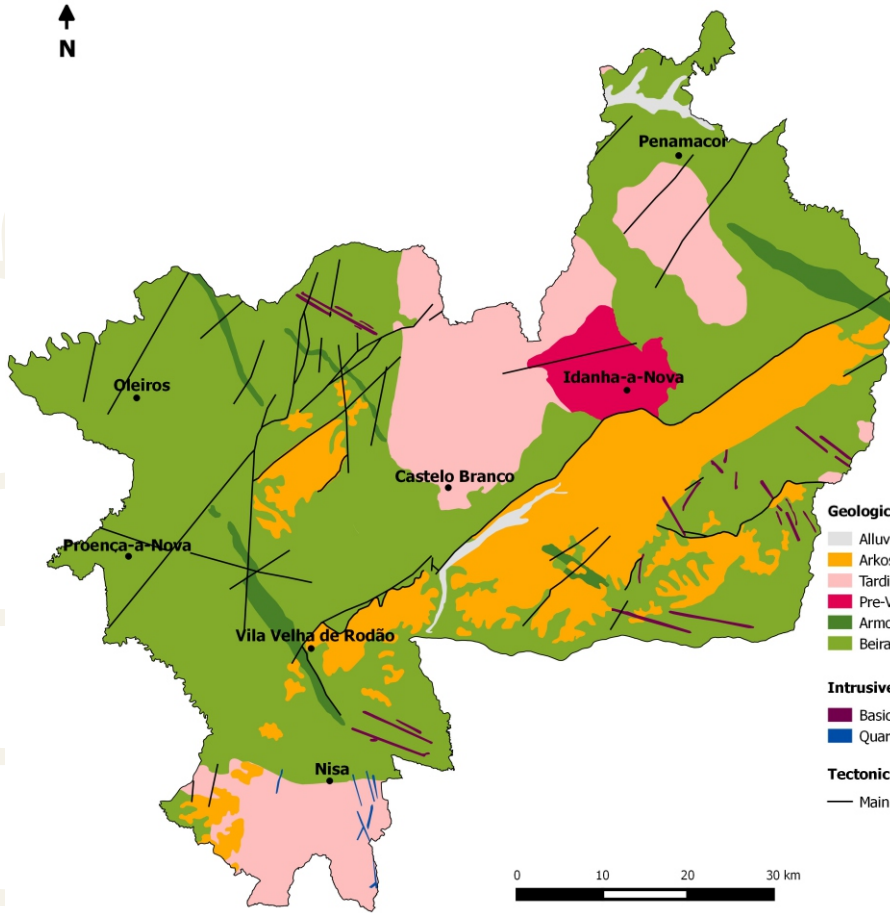
issuu.com/geoparknaturtejo



https://twitter.com/Geo_Naturtejo



<https://www.linkedin.com/company/geoparknaturtejo/>



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)

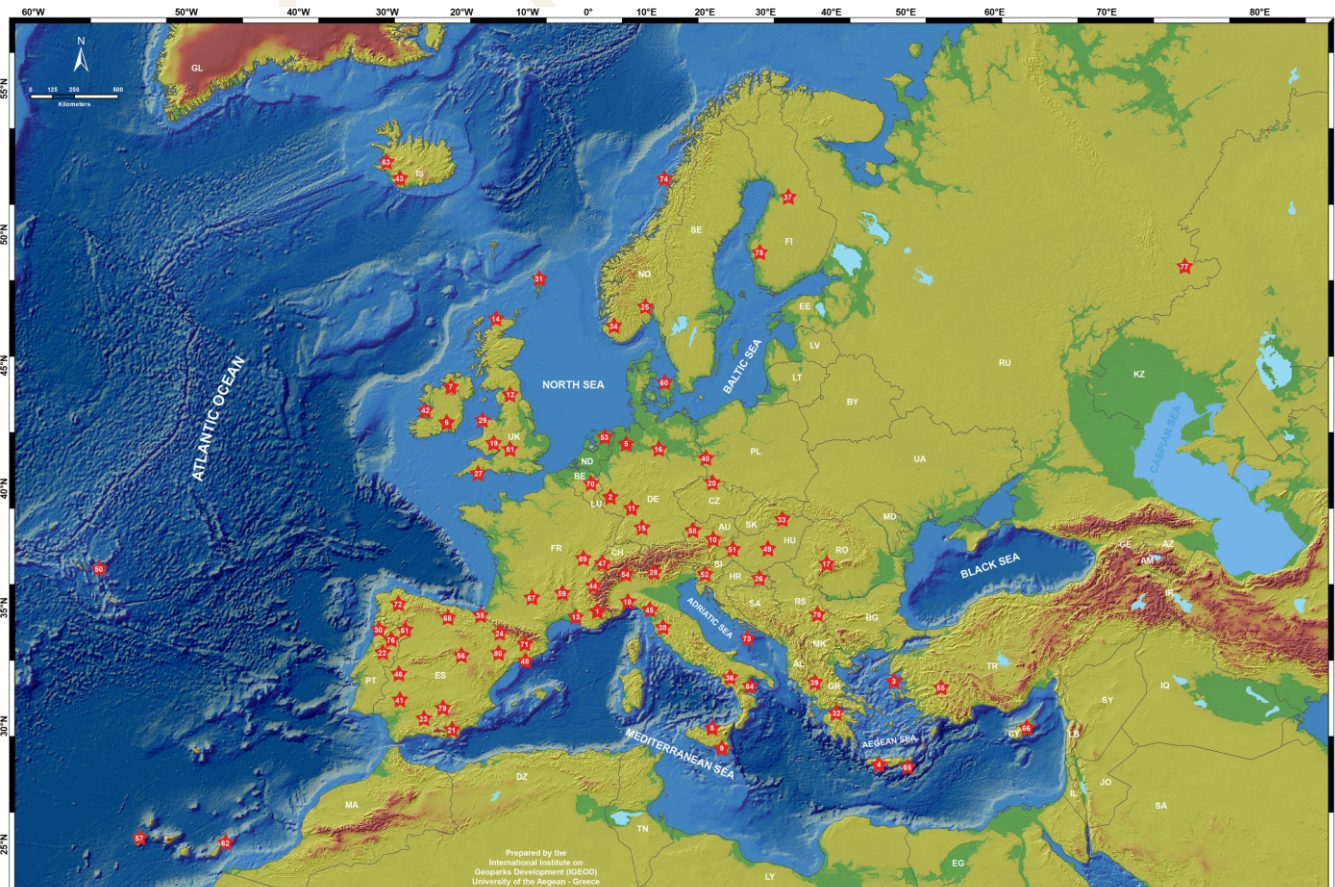
Intrusive rocks

- Basic rocks, aplites and pegmatites
- Quartz

Tectonic

- Main faults

Geoparks: Geology with human face





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