

In this issue:

Portugal's oldest fossils found in Penha Garcia are over 560 million years in age
At the 10th UNESCO Global Geoparks Conference in Marrakech
Working visits by Seridó and Orígens Geoparks to Naturtejo Geopark

...and more!

CRUZIANA

NATURTEJO UNESCO GLOBAL GEOPARK - E-MAGAZINE





MONTHLY ACTIVITIES



September 1st - Portugal's oldest fossils found in Penha Garcia are over 560 million years in age. The oldest animal fossils found in Portugal have now been discovered near Penha Garcia. Ages obtained in the vicinity of where the fossils were found point to values above 560 million years. Penha Garcia, a village in the municipality of Idanha-a-Nova, was already recognised by the international scientific community for the occurrence of spectacular fossils attributed to the lifestyles and behaviour of trilobites, marine organisms that lived here almost 480 million years ago. In an unexpected valley that breaks off behind the parish church, we'll find Penha Garcia Ichnological Park, one of the main geomonuments of Naturtejo UNESCO Global Geopark. This wealth of fossils is characteristic of the early evolution of animal life, in a chronological period that geologists have named the Palaeozoic (meaning ancient life), which began around 539 million years ago. Now, the small team of scientists working with the support of the Municipality of Idanha-a-Nova and coordinated by Carlos Neto de Carvalho (Municipality of Idanha-a-Nova/IDL - University of Lisbon) has discovered fossilised remains that date back to the origins of animal life.

The new palaeontological site was discovered not far from the chapel of Our Lady of Guadalupe. The fossils were found by Italian palaeontologist Andrea Baucon as part of ongoing research. "The discovery was an incredible thrill," says Andrea Baucon, "we've been looking for these fossils for over 15 years, but only now have we found them." In a eucalyptus grove there are sandstone formations with fine intersperses of what is commonly known as shale, with ripple marks and other sedimentary structures that attest to their deposition in a very different landscape to today. Hundreds of millions of years ago, these sediments corresponded to the seabed. The tectonic movements that have taken place over such a long period of time have erected the double mountain ridge of Penha Garcia and cooked the sediments into the metamorphic rocks we find today. These rock formations appear very monotonous and are very common throughout the central region of the country, extending well beyond the border with Spain. However, fossilised animal remains have never before been found in such ancient rocks. In slightly older formations, not far from Penha Garcia, the oldest fossils in Portugal, bacteria measuring a thousandth of a millimetre, had already been described by geologist António Sequeira. Recently, Lourenço Crispim's thesis, coordinated by professors Telmo Bento dos Santos (Lisbon Faculty of Sciences) and Martim Chichorro (GeoBioTech - New University of Lisbon), made it possible to determine the age of these fossils at around 588 million years, based on the use of radiometric methods applied to a mineral - zircon - that occurs in these rocks. As part of the same thesis, rocks close to the new palaeontological site were found to have a maximum estimated age of around 560 million years, also Precambrian, corresponding to the period known as the Ediacarian. However, the fossils found occur in rocks even older than these and are therefore even older. "This implies that the newly discovered fossils have faced a dizzying chasm of time" - says Andrea Baucon - "they were already very old fossils at the time of the T-rex, much older than the Atlantic Ocean or the Alps". And what do these new fossils correspond to?

The fossils correspond to traces of animals that travelled across the seabed searching for food. The animal would have been just under 10 mm wide and left its somewhat sinuous path preserved in the rocks as it fed on organic remains contained in the sediments. This mark of biological activity known as an ichnofossil allows us to understand how this animal fed: "we know that the organism responsible for the ichnofossil had a rigid skeleton, something that is indicated by the way it penetrated and churned the sediments as it moved around with the intention of looking for food, moving up and down, to one side and the other - mobility, evidence of reaction to nerve stimuli and the presence of a skeleton are criteria that best define animal activity," says Carlos Neto de Carvalho. The search is still in its early stages. Naturtejo UNESCO Global Geopark is organising a new research campaign in Penha Garcia, while scientists from the Piacenza Natural History Museum and the University of Genoa are analysing the curious shape of the structures already found.

The oldest known animal fossils in the world date back 890 million years and correspond to a type of marine sponge - a very simple animal made up of multiple cells organised into a skeleton, with no nervous, circulatory or digestive system. Some of the oldest traces of animals showing the ability to move are ichnofossils found in neighbouring Extremadura and date back around 565 million years. The fossilised skeleton of the oldest animal is 558 million years old and was recently found in north-west Russia. In this way, the new fossils from Penha Garcia have gained international notoriety as one of the oldest references for the study of the evolution of animal life in its earliest stages.



September 4th - Scientific work presented in Malaga. Paula Gomez Gutierrez, Antonio Toscano Grande and Joaquín Rodríguez Vidal presented their work on the sites with proboscidean footprints discovered by the team in which Naturtejo Geopark's scientific coordinator, Carlos Neto de Carvalho, participates, in the south of the Iberian Peninsula. This presentation took place at the XXV Biennial of the Royal Spanish Society of Natural History, in the Biology and Geology session in Malaga.



© CCV Floresta

September 5th - Hike through the "Secrets of Almourão Valley". We closed this year's edition of the Living Science in the Summer Programme with a hike through the 'Secrets of Almourão Valley' in Proença-a-Nova. At every turn, participants discovered the Geodiversity and Biodiversity on the banks of the Ocreza River, guided by Marta Palhim from the Living Science Forest Centre. No-one was indifferent to the devastating impact of the recent fires in Muradal Mountain, which, although not affecting the trail, destroyed much of the surrounding landscape.



September 6th to 10th - At the 10th UNESCO Global Geoparks Conference in Marrakech. UNESCO's 10th International Conference on Global Geoparks took place in Marrakech, Morocco. The conference was organised by M'Goun Geopark. More than 1.500 participants enjoyed the excellent hospitality and shared their experiences and results with colleagues and friends from all over the world. Naturtejo Geopark was present in six papers related to projects taking place in the territory or in partnership with the UNESCO Geoparks of Portugal. Representatives from 190 UNESCO Global Geoparks took part in the General Assembly of the Global Geoparks Network. The 4th Ordinary General Assembly of the Global Geoparks Network took place during the 10th International Conference on UNESCO Global Geoparks. Carlos Neto de Carvalho was the representative of Naturtejo Geopark in the general assembly. The General Assembly unanimously agreed on the GGN Executive Council Report on Activities 2022-2023 and the Strategic Action Plan for the period 2024-2025. At the UNESCO Global Geoparks Council meeting, 16 geopark projects were accepted during the first meeting of the 8th session, organised under the auspices of M'Goun UNESCO Global Geopark. 42 observers from 15 countries also took part in this meeting.

The Geoparks Exhibition was organised in parallel with the 10th UNESCO International Conference on Global Geoparks. With the participation of more than 42 countries, GGN, UNESCO, Ministries, the 12 regions of Morocco and local partners of M'Goun UNESCO Global Geopark, the Geoparks Exhibition became a significant opportunity to promote Geoparks to the Conference participants and present the diversity of activities and treasures of geodiversity in UNESCO Global Geoparks. Naturtejo Geopark was present together with the other Portuguese geoparks in a shared space.

Finally, Joana Rodrigues also attended the meeting of the IGCP726 GEOfood project, with a view to develop this international brand.



September 9th - Templar Days in Monsanto. As part of this event organised by the Poor Knights of the Temple of Jerusalem Association, Manuela Catana led a film crew in Penha Garcia, in the Ichnological Park, to collect images for a 3-minute video about the municipality of Idanha-a-Nova. Naturtejo Geopark's mascot, "Judite the Trilobite" took part in the filming, next to the Fossils House to welcome visitors to the area! In the afternoon, in Monsanto, Armindo Jacinto took part in the opening session of the round table "In conversation with... Museology today", in which Manuela Catana also took part as a speaker, presenting Naturtejo UNESCO Global Geopark. Around 25 people took part in the round table.



September 13th and 14th - Technical visit by members of Seridó UNESCO Global Geopark team (Brazil) to Naturtejo Geopark.

September 13th and 14th - Technical visit by members of Seridó UNESCO Global Geopark team (Brazil) to Naturtejo Geopark. Naturtejo Geopark welcomed a delegation from the Seridó Geopark (Rio Grande do Norte, Brazil) for a technical visit to the territory. The delegation was accompanied by Manuela Catana and Joana Rodrigues from Naturtejo Geopark and José Brilha, a professor at University of Minho and member of the Global Commission on Protected Areas and the IUCN (International Union for Conservation of Nature) Geological Heritage Specialist Group. In Naturtejo Geopark, accompanied by Manuela Catana, they travelled along Penha Garcia Fossils Trail to discover the Ichnological Park and the Boulders Trail, in Monsanto, to discover Monsanto Inselberg and the Historical Village, discussing natural and historical-cultural heritage, as well as tourist and educational strategies. The following day, accompanied by Joana Rodrigues, they visited the Barrocal Park in Castelo Branco and Portas de Ródão Natural Monument. The group also visited some partner companies such as Geocakes and GeoRestaurant Petiscos e Granitos.

This visit was an opportunity to share experiences and knowledge, as well as to strengthen collaboration between the two Portuguese-speaking Geoparks. For the coordinators of Seridó Geopark, Janaina Medeiros and Marcos Nascimento, Naturtejo Geopark, the first classified Geopark in Portugal, has over the years been an internationally recognised model for good sustainable development practices.

Seridó Geopark was officially classified by UNESCO in 2022 and is currently an extremely active and dynamic member of the Latin American and Caribbean Geoparks Network and the Global Geoparks Network, with a strong link to the Geoparks in Portugal.



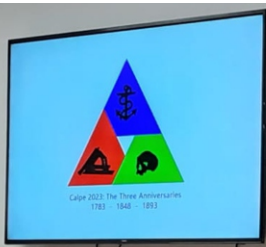
September 16th - Ichnology Training Course for the Portuguese Association of Biology and Geology Teachers. The second part of the Ichnology Field Course for the Portuguese Association of Biology and Geology Teachers was dedicated to the Mesozoic. This is the first accredited training course in Ichnology ever held in Portugal, and possibly in any other country in the world. It was a whirlwind weekend with an excellent first day between Salgado beach and S. Bento "Jurassic beach". The second day, designed for the sector north of Cape Espichel, was especially wet, muddy and refreshing! Teachers with a deep desire for knowledge and a great sense of humour who didn't give up even in the most adverse conditions, under floods of water coming down the sky, rushing and throwing in our path and at our ichnofossils. An unforgettable adventure!



September 22nd - New European project RESILIAGE kick off. Naturtejo Geopark was at the Politecnico di Torino to take part in the consortium meeting of the European research project Horizon Resiliage, which includes 18 partners, including UNESCO itself. A research project worth 5 million euros in which Naturtejo UNESCO Global Geopark will be one of the experimental laboratories for the technological tools that will be developed to increase the resilience of local communities in the face of climate change. This Kick-off Meeting was attended by Carlos Neto de Carvalho and Carla Jacinto, representing Naturtejo Geopark. Carlos Neto de Carvalho presented Naturtejo and the Proença-a-Nova case study, and also participated via video in the International Summer School that took place at the Politecnico di Torino a few days later.



September 22nd - Visit to the historic village of Monsanto. Geolife accompanied a group of 35 people from Bank of Portugal Pensioners Commission in Porto on a visit to the historical village of Monsanto.



September 23rd to 26th – In Gibraltar talking about Geoparks. Naturtejo Geopark was once again introduced as an example, this time at the 27th International CALPE Congress organised at University of Gibraltar by the Gibraltar National Museum. This year's edition of CALP was dedicated to celebrate three important dates for the science of this territory. Including a World Heritage Site, Carlos Neto de Carvalho presented the UNESCO Global Geoparks model, with numerous examples of good practice in geoparks around the world. This was once again an opportunity to discover Gibraltar's important historical and cultural heritage and to establish new cooperation projects.

September 23rd - In the Geosciences Teachers Updating Course at Terras de Cavaleiros Geopark. The XLIII CAP - Updating Course for Geoscience Teachers, organised by the Portuguese Association of Geologists and Terras de Cavaleiros Geopark, took place.

Under the theme 'From the mantle to the top of Terras de Cavaleiros UNESCO Global Geopark', this 30-hour certified teacher training course had the main objectives of demonstrating the importance of Geoparks as educational resources, as well as training teachers to develop educational strategies.

Joana Rodrigues taught the module 'How is science communicated in UNESCO Global Geoparks?', which discussed the difficulty of affirming Geosciences in the public arena, predominantly as a result of poor communication strategies, the contributions of research into science communication to improve society's relationship with science and the role of Geoparks, by definition privileged spaces for education, science, culture, sustainable development and the promotion of geodiversity.



September 28th - Visit from the mayors of Orígens Geopark.

September 28th - Visit from the mayors of Orígens Geopark. A group of mayors from Orígens Geopark in Catalonia came to learn about projects being developed by Spanish and Portuguese geoparks. Over lunch they met with the President of Naturtejo Geopark, Armindo Jacinto, in the school canteen in Idanha-a-Nova to discuss sustainability projects, including the Organic Canteen, where pupils and teachers are invited to eat local and certified organic products every day. Later, with Carlos Neto de Carvalho, they visited the Historical Village of Monsanto, a National Monument, where they were introduced to the partners Petiscos & Granitos and Monsanto Geo-Hotel. Finally, they visited Penha Garcia – Portuguese Village where, at the local museum, a session was held in which they shared information about UNESCO Global Geopark Naturtejo, its organisation, history and projects. esta Noite Europeia dos Investigadores juntam centenas de expositores e largos milhares de interessados.



September 29th - European Researchers' Night takes Naturtejo Geopark to Lisbon and Braga. The European Researchers' Night is a Europe-wide public science communication event that brings researchers closer to the non-specialist public and takes place simultaneously in several European cities. This initiative allows the public to discover research, science and innovation through entertainment, and shows its impact on citizens' daily lives, stimulating interest in scientific careers, especially among young people.

This year, under the theme 'Science for All - Sustainability and Inclusion', Naturtejo Geopark teamed up with University of Minho, in Braga, and the National Museum of Natural History and Science, in Lisbon. In Braga there was a tasting of natural mineral waters organised by Joana Rodrigues and students from the Department of Earth Sciences. In Lisbon, Carlos Neto de Carvalho gave a talk on Naturtejo Geopark and its sustainability projects. The programmes of this European Researchers' Night bring together hundreds of exhibitors and many thousands of interested parties.

IMPACT OF GEOPARK IN MEDIA



TV & Radio

- September 1st (TSF) - Animal fossils more than 560 million years old discovered in Idanha-a-Nova
- September 1st (SIC Notícias) - Animal fossils more than 560 million years old discovered in Idanha-a-Nova
- September 1st (RTP) - Animal fossils more than 560 million years old discovered in Idanha-a-Nova
- September 1st (RTP Notícias) - Animal fossils more than 560 million years old discovered in Idanha-a-Nova
- September 5th (Rádio Castelo Branco) – Portugal's oldest fossils found in Penha Garcia, more than 560 million years old
- September 10th (Beira Baixa TV) – Scientists discover missing piece of Evolution in 130 million-year-old rocks - Extremely rare fossils reveal the oldest evidence of fish that lived in abyssal marine environments, delaying the colonisation of the ocean floor by 80 million years
- September 19th (Beira Baixa TV) - Brazilian Geopark highlights sustainable development of Naturtejo Geopark
- September 20th (Rádio Castelo Branco) - Seridó Geopark delegation visits Naturtejo Geopark
- September 29th (radioeste.pt) – Oldest dinosaur footprints on the Peninsula discovered in Portugal
- September 29th (lusatv.com) – The oldest dinosaur footprints on the Iberian Peninsula discovered in Portugal

Newspapers & www

- August 31st – (www.greenme.it) - Scoperte api mummificate del periodo dei faraoni, perfettamente conservate nei loro bozzoli per quasi 3.000 anni
- Mummified bees from the Pharaonic period discovered, perfectly preserved in their cocoons for almost 3.000 years
- September (Raiano) - Portugal's oldest fossils found in Penha Garcia, more than 560 million years old
- September 1st (Diário de Noticias) – Animal fossils more than 560 million years old discovered in Idanha-a-Nova
- September 1st (viagens.sapo.pt) – Portugal's oldest fossils found in Penha Garcia, more than 560 million years old
- September 1st (centrotv.sapo.pt) – Portugal's oldest fossils found in Penha Garcia, more than 560 million years old
- September 1st (Observador) - Fossils 560 million years old discovered
- September 1st (Detik.com) – Scientists Discover a Bee Mummy Nearly 3,000 Years Old, Still Intact
- September 1st (Diariohoy.net) – 3,000-year-old mummified bees discovered
- September 1st (Ilmeteo.net) – Mummified bees from the age of the pharaohs discovered in Portugal, the find is astonishing
- September 2nd (Halktv.com.tr) – Bees from the Time of the Pharaohs Found Mummified

IMPACT OF GEOPARK IN MEDIA



- September 2nd (Diário Digital de Castelo Branco) – Fossils of animals over 560 million years old discovered in Penha Garcia
- September 3rd (BeiraNews) – IDANHA-A-NOVA: Portugal's oldest fossils found in Penha Garcia are more than 560 million years old
- September 4th (Meteored.com.ar) – Surprising discovery_ mummified bees found in Portugal!
- September 4th (El Diario) - Trace fossils found in the deep sea 130 million years ago
- September 5th (oglobo.globo.com) – Older than Tyrannosaurus Rex: 560 million-year-old animal fossil discovered in Portugal
- September 5th (Tempo.com) – Mummified bees from the age of the pharaohs discovered in Portugal
- September 6th (Gazeta do Interior) – By a team led by the Scientific Coordinator of Naturtejo Geopark - Bees from the time of the pharaohs found mummified on the Southwest Coast
- September 6th (Gazeta do Interior) –Naturtejo Geopark Geologists describe two new fossils on the south-west coast of Portugal
- September 6th (Gazeta do Interior) – They're the oldest in Portugal - Penha Garcia reveals fossils more than 560 million years old
- September 7th (Reconquista) – Italian scientists analyse marine animals - 560 million-year-old fossils discovered in the borderland
- September 7th (Portalnews.co) – Hundreds of mummified bees found in Portugal 3,000 years ago
- September 7th (Tiempo.com) – Bees from the Time of the Pharaohs Found Mummified in Portugal
- September 8th (BeiraNews) - Deep oceans reveal curious fossils
- September 8th (ZAP Notícias) – Oldest traces of deep-sea fish found by Portuguese researchers
- September 9th (escolaeducacao.com.br) – Scientists find fossilised bee cocoons dating back 3,000 years
- September 9th (Saiba Mais.jor.br) – RN delegation in Morocco passes through earthquake that has left more than 800 dead; potiguares are fine
- September 10th (www.avvenire.it) – Palaeontology. Fossil traces of the oldest abyssal fish in the Apennines
- September 11th (Libertà Piacenza) – Fish fossils discovered in Quaraglio. Baucon_ Rescribed the history of the oceans
- September 14th (www.nature.com) – The last frontier for vertebrates - Trace fossils found in central Italy are the earliest evidence of vertebrates living on the deep seabed, the last habitat they colonized
- September 18th (jornalaltoalentejo) - Delegation from Seridó Geopark (Brazil) visits Naturtejo Geopark
- September 18th (Diário de Coimbra) – Delegation from Seridó Geopark (Brazil) visits Naturtejo Geopark
- September 18th (BeiraNews) - Delegation from Seridó Geopark (Brazil) visits Naturtejo Geopark
- September 18th (BeiraNews) - Brazilian Geopark highlights sustainable evolution of Naturtejo Geopark during visit

IMPACT OF GEOPARK IN MEDIA



September 18th (primocanale.it) – Also the University of Genoa in the discovery in Italy of fossil traces of the first abyssal fish

September 18th (Reconquista.pt) – Geoparks_ Seridó visit Naturtejo's territory

September 19th (Sci.News) – 130-Million-Year-Old Trace Fossils Reveal Earliest Evidence of Deep-Sea Vertebrates

September 20th (www.ufrn.br) – Seridó Geopark takes part in activities in Morocco and Portugal

September 20th (Scienze Notizie.it) – Rarest fossilised traces of the oldest abyssal fish discovered in Italy

September 21st (Reconquista) – Naturtejo Geopark is a recognised model - Naturtejo receives delegation from Brazil

September 21st (EL PAÍS) – Eight great experiences in central Portugal to enjoy an unknown territory _ Lonely Planet

September 29th (Público) – Oldest dinosaur footprints on the Iberian Peninsula discovered in Portugal

September 29th (DN) - Oldest dinosaur footprints on the Iberian Peninsula discovered in Alvaiázere

September 29th (headtopics.com/pt) – Oldest dinosaur footprints on the Iberian Peninsula discovered in Portugal

September 29th (24.sapo.pt) – Oldest dinosaur footprints on the Iberian Peninsula discovered in Portugal

September 29th (Expresso-Boa Cama Boa Mesa) – Discovering Idanha-a-Nova, Creative City of Music

September 30th (Jornal de Leiria) – Oldest dinosaur footprints on the Iberian Peninsula discovered in Alvaiázere

September 30th (nit.pt) – Oldest dinosaur footprints on the Iberian Peninsula discovered in Portugal

SCIENTIFIC CONTRIBUTIONS FOR THE GEOPARK AND THE GEOSCIENCES



BAUCON, A., FERRETTI, A., FIORONI, C., PANDOLFI, L., SERPAGLI, E., PICCININI, A., NETO DE CARVALHO, C., CACHÃO, M., LINLEY, T., MUÑIZ, F., BELAÚSTEGUI, Z., JAMIESON, A., LO RUSSO, G., GUERRINI, F., FERRANDO, S. & PRIEDE, I. - The earliest evidence of deep-sea vertebrates. PNAS, 120(37), e2306164120 <https://doi.org/10.1073/pnas.2306164120>.

FIGUEIREDO, S.D., NETO DE CARVALHO, C., CUNHA, P.P., DUARTE, L.V., FONSECA, A., MONTEIRO, C. & FORTE, J. - The first dinosaurs in Iberia: a new dinosaur tracksite from the Sinemurian (Lower Jurassic) of Portugal. Historical Biology, DOI: 10.1080/08912963.2023.2256751.

ALVES, J., MORAIS, A., RODRIGUES, J., MENESES, S., SALVADOR, C., CASTRO E., AZEVEDO, P., DUARTE, A., ROCHA, D. - Code of conduct and good practices in Portuguese Geoparks. Abstract Book of the 10th International Conference on UNESCO Global Geoparks. 4th – 11th September, Marrakech, Maroco, 14.

RODRIGUES, J., JACINTO, C., ROCHA, D., BELÉM, M., MENESES, S. LIMA, E., BORRALHO, A. MORAIS, A., ALVES, J., CASTRO, E., LOUREIRO, F. - The support of the Portuguese UNESCO Global Geoparks Network to the Portuguese Aspiring Geopark Territories. Abstract Book of the 10th International Conference on UNESCO Global Geoparks. 4th – 11th September, Marrakech, Maroco, 275.

ROCHA, D., VILAR, O., RODRIGUES, J., JACINTO, C. MENESES, S., SALVADOR, C., MORAIS, A., ALVES, J., CASTRO, E., AZEVEDO, P., PORTUGAL, J., FERREIRA, T. - Programs 100% Responsible – touristic programs for sustainability in Portuguese UNESCO Global Geoparks. Abstract Book of the 10th International Conference on UNESCO Global Geoparks. 4th – 11th September, Marrakech, Maroco, 353.

RODRIGUES, J., JACINTO, C., CASTRO, E., LOUREIRO, F., MENESES, S., BORRALHO, A., MORAIS, A., ALVES, J., ROCHA, J., VILAR, O., FERREIRA, T., PORTUGAL, J., BÁRTOLO, P. - Promoting the UNESCO Global Geoparks label and geotourism destinations in Portugal. Abstract Book of the 10th International Conference on UNESCO Global Geoparks. 4th – 11th September, Marrakech, Maroco, 354

RODRIGUES, J., COSTA E SILVA, E., PEREIRA, D. I. - Science communication in UNESCO Global Geoparks. Abstract Book of the 10th International Conference on UNESCO Global Geoparks. 4th – 11th September, Marrakech, Maroco, 355.

RODRIGUES, J. & PALHIM, M. - Living Science in Naturtejo UNESCO Global Geopark (Portugal). Abstract Book of the 10th International Conference on UNESCO Global Geoparks. 4th – 11th September, Marrakech, Maroco, 356.

NETO DE CARVALHO, C. – UNESCO Global Geoparks: Sustainable development on the rocks. 27th Calpe Conference, The Three Anniversaries 1783-1848-1893. The Gibraltar National Museum, 35-36.

SCIENTIFIC CONTRIBUTIONS FOR THE GEO PARK AND THE GEOSCIENCES



GÓMEZ GUTIÉRREZ, P., MUÑIZ, F., NETO DE CARVALHO, C., TOSCANO, A., CHACÓN, J.A.M., BELAÚSTEGUI, Z., GALÁN, J.M., RODRÍGUEZ-VIDAL, J., CÁCERES, L.M., RUIZ, F., RAMÍREZ-CRUZADO, S., BELO, J., CACHÃO, M., PROENÇA CUNHA, P., FIGUEIREDO, S., MOREIRA, N., BAUCON, A., FINLAYSON, G., FINLAYSON, S., GILES GUZMÁN, F., FINLAYSON, C. - Tras el rastro de *Palaeoloxodon antiquus* en el suroeste ibérico: nuevas evidencias icnológicas. In: Fiegl, J.P.-R., Fernández, B., Onrubia, M. & Díaz-Acha, Y. (Eds.), Libro de Resúmenes XXV Bienal de la Real Sociedad Española de Historia Natural, Málaga, 2 a 6 de Setembro, 159-160.

PROMOTION FOR THE GENERAL PUBLIC

PASSEIO
ENTRE BODOS
Salvaterra do Extremo
- Monfortinho
14 . outubro . 2023



17 a 22 de outubro **A FESTA**

78 anos de tradição para o Folclore do Património Cultural Imaterial do Alentejo. O Festival de Salvaterra do Extremo é um dos maiores e mais tradicionais festivais de música folclórica do Alentejo. Celebrado entre as duas povoações: Salvaterra do Extremo e Monfortinho.

Características da percursa:
Tipo de percursa: Linear
Distância: aproximadamente 18 km
Grau de dificuldade: Alta

Limite de inscrições: 50
Data limite de inscrições: 12 de outubro de 2023, até às 12:00
Valor da inscrição: 10€

A inscrição pode ser efetuada por telefone através do número de telefone 277 202 900 ou através do email turismo@idanha.pt, indicando o Nome Completo, NIF, idade e contacto telefónico.

Ponto de encontro: 7h30, junto à Igreja Matriz de Salvaterra do Extremo.

organização
Comunidade de Montanha, Centro Cultural Raialvo, 2023, etc.

apoio
visit Portugal, etc.

dia mundial da
música
ZEBREIRA
salão de apoio à comunidade

21:00
01. OUTUBRO
filarmónica idanhense

entrada gratuita

organização
idanha 1000, etc.

apoio
visit Portugal, etc.

idanha-a-
7 OUT
-velha

entrada livre

6€
PRATO

+10 CHEFS
Show cooking +
Mercado de Produtores Bio +
DJ + Animação

ARREBITA
GASTRONOMIA LOCAL SUSTENTÁVEL
IDANHA BIO

organização
idanha 1000, etc.

apoio
CEPSA, visit Portugal, etc.

PROMOTION FOR THE GENERAL PUBLIC

1/2

12 E 13 OUTUBRO

14º ENCONTRO ANUAL DE PARCEIROS

ROTEIRO DAS MINAS E PONTOS DE INTERESSE MINEIRO E GEOLÓGICO DE PORTUGAL

ORGANIZADORES

12 OUTUBRO | 17H00

AUDITÓRIO DO CENTRO CÍVICO DE MANTEIGAS

O PATRIMÓNIO GEOLÓGICO E A AGENDA 2030
O papel do Roteiro das Minas e Pontos de Interesse Mineiro e geológico de Portugal na Agenda 2030

Moderação
• Emanuel de Castro | Estrela Geopark Mundial da UNESCO

Intervenções
• Joana Rodrigues | Naturtejo Geopark Mundial da UNESCO
• André Lopes | CM Visu
• Renato Neves | ADERES
• Álvaro Pinto | CCV Lousal - Mina de Ciência
• Miguel Reis Silva | Aspiring Geoparque Oeste
• Roberta Lobarinhas | IST

Debate final
• António Vieira | Universidade do Minho
• Emmaline Rosada | Universidade de Trás-os-Monte e Alto Douro

2/2

Organização: Direcção-Geral de Energia e Geologia, CCM, MANTTEIGAS, GUARDA

Organização: Direcção-Geral de Energia e Geologia, CCM, MANTTEIGAS, GUARDA

WEBINAR

PROGRAMAS

100% RESPONSIBLE

By Geoparks

24 OUTUBRO 2023
10H00 – 12h00

[LINK TEAMS AQUI](#)

TURISMO DE PORTUGAL

AGENDA

- Programas 100% *Responsible by Geparks*, breve enquadramento João Portugal, Turismo de Portugal
- Sustentabilidade nos Geoparques Joana Rodrigues, Geoparque Naturtejo
- Boas práticas de empresas: operação, comunicação e recetividade dos turistas aos Programas 100% *Responsible by Geoparks*:
 - Geoparque Naturtejo – Porta Raiana, Andreia Brito
 - Geoparque Arouca – Clube do Paiva, Rafael Soares
 - Geoparque Estrela – Estrela E-bike, Nuno Marcelo
 - Geoparque Açores – Futurismo, Cátia Chaves
 - Geoparque Terras de Cavaleiros – Sun Azibo Cruzeiroiros, Ângela Costa
- Apresentação do Guia Boas Práticas de Sustentabilidade para a Animação Turística Luís Coito, Turismo de Portugal
- Debate
- Encerramento dos trabalhos



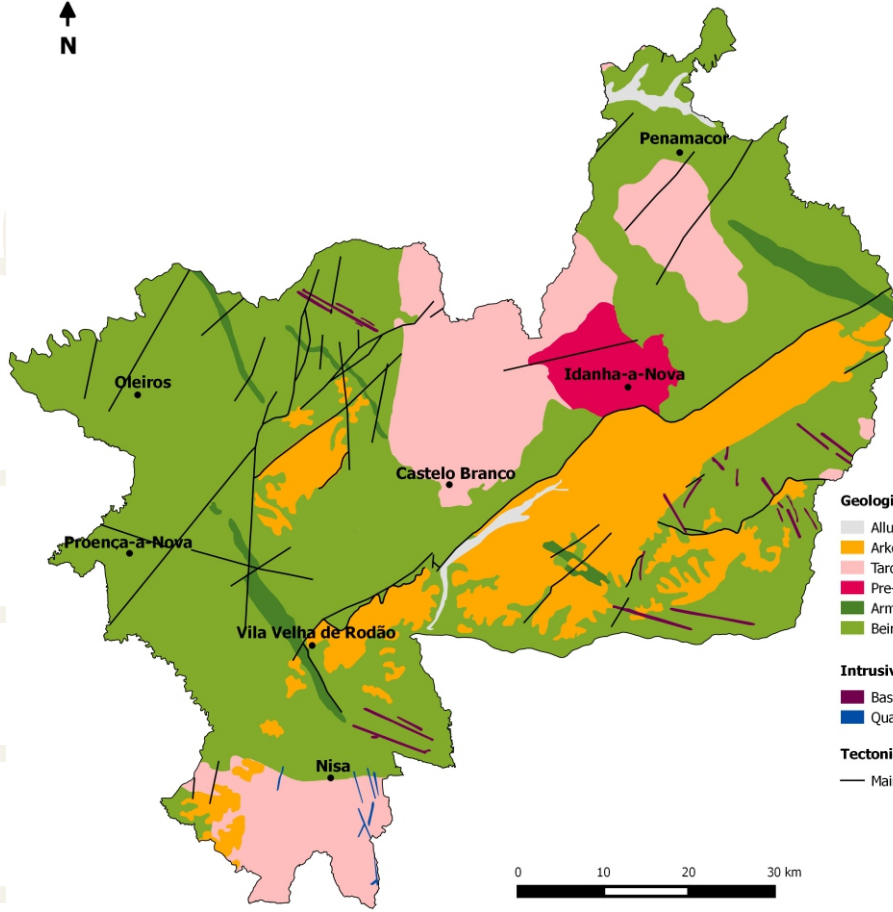
PROMOTION FOR THE GENERAL PUBLIC



Mercado Bio-Região
IDANHA-A-NOVA
SÁBADOS
DAS 08H00 ÀS 12H00
MERCADO MUNICIPAL
(PRAÇA)

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
-  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)

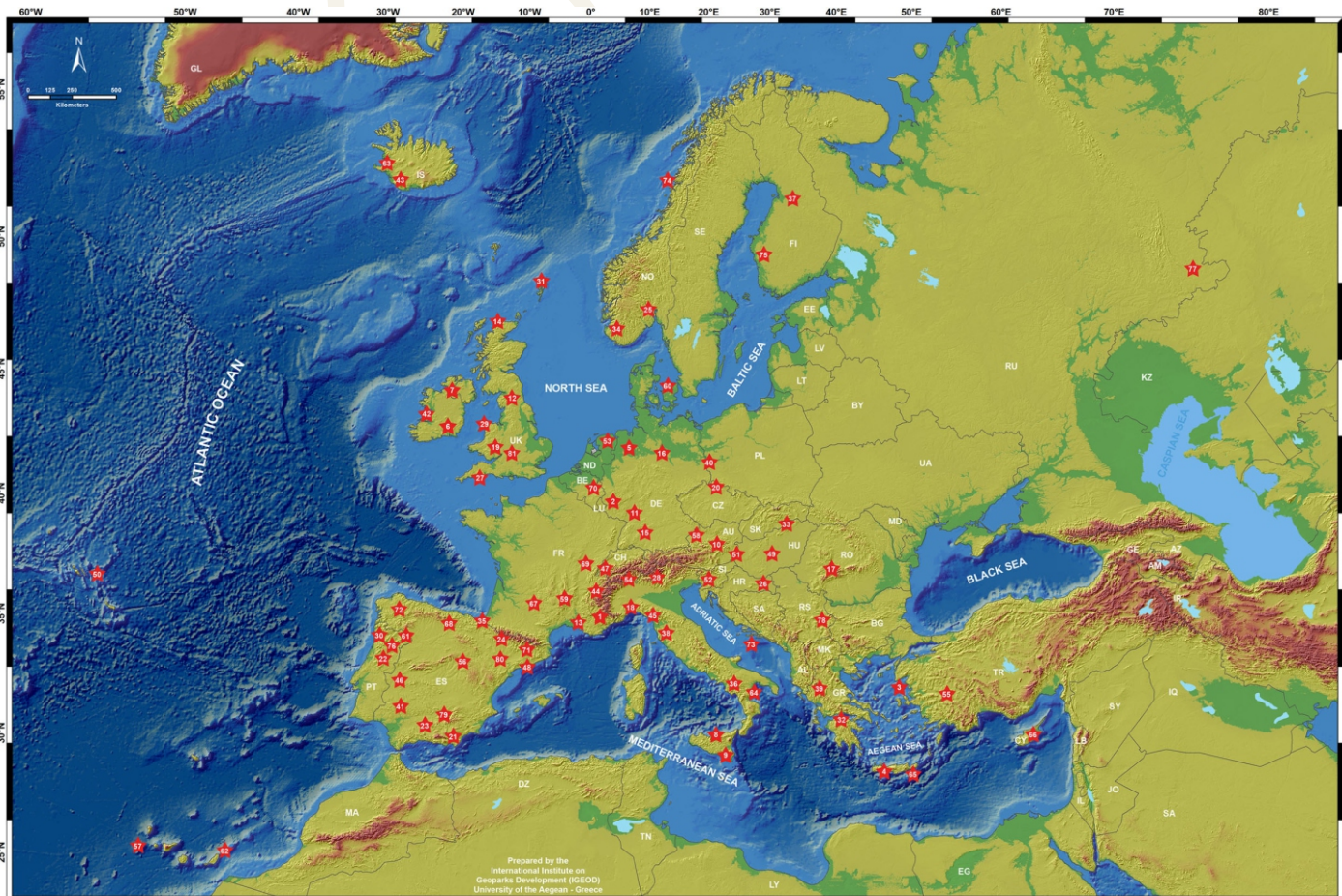
Intrusive rocks

- Basic rocks, aplites and pegmatites
- Quartz

Tectonic

- Main faults

Geoparks: Geology with human face





Edition - Geopark Naturtejo, 2023
Coordination - Carlos Neto de Carvalho
Texts - Carlos Neto de Carvalho,
Joana Rodrigues, Manuela
Catana, Carla Jacinto
Photos - Carlos Neto de Carvalho,
Joana Rodrigues, Manuela
Catana, CCV da Floresta
Clipping - Carla Jacinto e Alice Marcelo
Translation - Carla Jacinto
Design - Layer [Design and Print Studio]
Production - Joana Rodrigues



CRUZIANA

GEOPARK NATURTEJO DA MESETA MERIDIONAL EUROPEANA AND GLOBAL GEOPARK MONTHLY REPORT

www.geoparknaturtejo.com

NATURTEJO UNESCO GLOBAL GEOPARK - E-MAGAZINE