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



Geo Stories of our places and people: Álvaro

From the Serra de Alvelos the region falls until the middle Zêzere by narrow roads that wind in embedded valleys. The landscapes are of great magnitude, a magnanimous river is figured out but the view is lost in Álvaro. The waters flow and crease these lands of schist leaving natural places like the Mata de Álvaro, today the enormous floristic interest it once possessed practically disappeared, consumed by fire and oblivion, or the mills and waterfalls that make the Zêzere flow below the simple and charming bridge of Gaspalha. But when we manage to emerge from the great river, we are on top of it all, in the surroundings of Frazumeira where the view is spectacular, soon the view is directed to the tortuosity of its valley. We are in the heart of the Geomonument Zêzere River Meanders, more than 50 km of a route of twists and turns, calmed by the lake of Cabril dam but not hiding the recent past of upheaval and erosion. According to the standard of regional fracturing the Zêzere is fitted deeply in this low region between mountains of soft schist for creating a landscape of difficult interpretation and of easy appeal.

In this territory where the green tones, sunny slopes and dark corners, only the white of small villages sprinkle the ridges. In an area of 33.63 km², 11 villages and places and 237 inhabitants are dispersed, such as the tiniest that is almost not given by them. Álvaro can be adumbrated in the high mountains but is just discovered in a curve of the road passing its entry. An impressive location, balanced between the tight valley that goes down the mountains, in junction with the large Zêzere. In the palette of greens, between the waters of the river that reflect the pine forests, eucalyptus and olive groves at its high and steep margins, Álvaro is dawn, of practical and organic lines following the back of the great snake of schist that came to the river to drink and stayed around here.

Álvaro was municipality and territory of the Hospitalers. This noble past is marked in the small village by the presence of 12 chapels, among them the interesting Mercy chapel and the mother church of S. Tiago Maior, as well as by one or more details in the façade of a well learned style. Besides that, it is the harmony of Álvaro, as well as its privileged position as a balcony over the Zêzere, an ancient passing zone attracting the outsider. A network of walking routes radiates from the village that has everything to revive its development: location, landscape, heritage, brand "Schist village", rural tourism houses of quality, a fluvial beach and a restaurant at the beach, a variety of pedestrian and cycle tracks for those who like to go out and discover, a shop with regional products and artisans that work for a living, like Sr. João from Gaspalha and his famous cork benches. The great route of Zêzere follows the sinusoidal geometry of the valley and helps to understand the landscape for those who search for the natural history of this great Portuguese river. Other options are the small trails through interesting places in Álvaro, from the possibility to eat cherries caught from the tree in Longra, to the experience of constructing a cork bench at Gaspalha. Álvaro is not missing anything, except being known as the heart of the Zêzere.

References

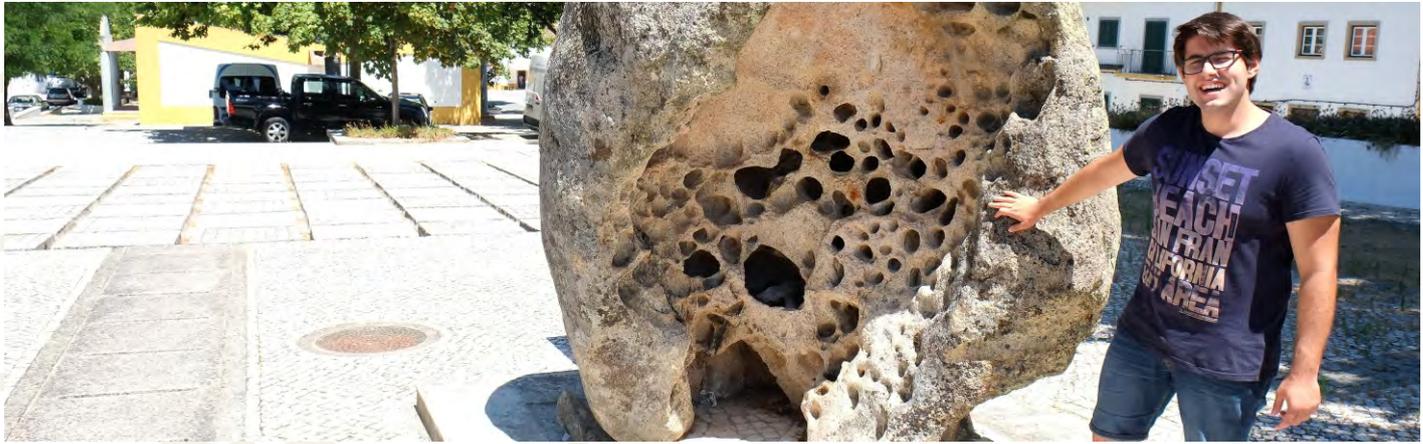
- Neto de Carvalho, C., Rodrigues, J.C. & Gonçalves, D. 2013. Património Geológico de Oleiros: inventário de geossítios e propostas para a sua valorização. Açafa On-line, 6, 4-61.
- Pimentel, J.M.P.A. 1881. Memórias da Villa de Oleiros e do seu concelho. Typographia da Virgem Immaculada, Angra do Heroísmo, 358pp.
- Ribeiro, O. 1949. O fosso do Médio Zêzere. Comunicações dos Serviços Geológicos de Portugal, XXX, 79-85.

The editor
Carlos Neto de Carvalho
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Geologist

Cover: (Project Objectiva: Geopark)



MONTHLY ACTIVITIES



6th June - 16th August - Another internship completed in the Geopark. André Nunes, student of the 2nd year of Leisure management and Touristic animation at the College of Tourism of Estoril did an internship in the frame of touristic information and monitoring groups in Nature Sports.

2th July - 4th August - Training for "Geology in summer". Naturtejo Geopark fostered the training of technicians of the Center for Living Science of the Forest in Proença-a-Nova for realizing the activities of "Geology in summer". This year, the offer of the Center for Living Science presents diverse activities of Science, with approx. 5 experiences dedicated to understanding Portas de Almourão Geomonument. Carlos Neto de Carvalho advanced the practical training, in the field, for four monitors.

August - Geopark in a new European project of education and new technologies. The Naturtejo Geopark will integrate the European project of education in science ESTEAM. This project integrated in the ERASMUS+ program results from personal experience and the necessities of science teachers. The education programs and the process of learning are every time more complete, absorb every time more school hours and are presented every time more stringent. The traditional form of education has started to loose effect facing new, modern and enjoyable forms of teaching that are included in the process of learning. These are more appealing when incorporating new information and communication technologies. The access to global knowledge platforms is provided and a growth in the use of digital education exists, eventually in combination with the learning imposed "in the field".

The European ESTEAM project searches to strengthen the education methods in the school with creating an experience platform between schools, specialists and geoparks in combination with open air activities and information and communication technologies. This project keeps as object the improvement in education-learning quality in schools through innovative teaching methods (education methods, work tools and experience places to the user (both real and virtual) that search to achieve the objects of the national curriculum for education in natural sciences with the development of a mobile platform of experience of teaching/users combined with open air activities. Out of the experience obtained by developed work will result a manual for professors/teachers of natural sciences utilizing a step-by-step method.

For the development of work and of resources for professors and teachers, as well as for the development of quality contents in a digital form and for the promotion of new information and communication technologies a partnership between the Center for Heritage of the Humanity of Idrija, the UNESCO Magma Geopark, the UNESCO Naturtejo Geopark, the university of Liubliana, as well as pilot-schools in Slovenia, Norway and Portugal, including the School Group José Silvestre Ribeiro of Idanha-a-Nova, as well as the Icelandic company of technology products Locatify will be created. The target audiences of this project are students and teachers of distinct types, like teachers and future teachers of Science and professors of Science Didactics at universities.

Through the project now presented and that will be coordinated in the region of the Naturtejo Geopark by Carlos Neto de Carvalho, its scientific coordinator, supported by the experience of the former teachers Manuela Catana and Joana Rodrigues, both collaborating in the activities of the Geopark, it is intending to give support to the education of future teachers in this field of science, providing current, modern and innovative practices in natural sciences, according to the priorities of education in schools. The ESTEAM focuses on the contents and innovative experiences provided to the students, in a form that enhances their curiosity for natural sciences, the future teachers will gain new knowledge, competences and experiences in pedagogic, methodological and didactic approaches, the involved geoparks will obtain new products and services with more quality in the offer of educative activities in their territories. The development of new information and communication technologies will provide the development of a didactic platform shareable with other schools, schools of higher education and UNESCO geoparks that came to join the present consortium, in action after the month of September and running for 36 months.



1st - 15th August - International Archaeological Camp in Proença-a-Nova. The Association for Studies of Alto Tejo, in partnership with many public Iberian institutes, including the Naturtejo Geopark, organized another international archeological camp coordinated by the archeologist João Caninas. This is an opportunity for the archeology students of Portuguese and Spanish universities, as well as local enthusiasts, to get a field experience with archeological experiments. During fifteen days supported by the municipality of Proença-a-Nova, excavations are developed at the walled settlement of Chão de Galego and at the tumulus of Mamoia da Anta, with another time impressive results. The Naturtejo Geopark, for another time, had the opportunity to associate with these excavations and to help with the geological characterization of the material through Carlos Neto de Carvalho. This took part at the dinner of the camp, realized at the village of Oliveiras and associated with the Naturtejo Geopark.



6th, 27th, 30th August and 13th September - Geology in Summer at the Portas de Almourão. The Center for Living Science of the Forest in Proença-a-Nova hosted this year 5 activities of the Geology in Summer program, prepared by the Naturtejo Geopark. These activities were very welcomed with all available places taken and waiting lists.

“The gold of the Portas de Almourão” is an experimental activity always very crowded and this year gold nuggets were found by everyone. Right away “the secrets of the Almourão valley” allowed discovering in the form of a healthy interpretative hike about the formation mechanisms of a mountain chain. Both activities highlight the scientific-entertaining importance of the Portas de Almourão geomonument in the regional context, and a scenic place of major importance where the natural diversity is relevant and multifaceted.



10th – 15th August – Geopark with a delux place at the Feira do Pinhal of Oleiros. Year after year the Feira do Pinhal is reinvented by bringing many novelties to the place which is every time more appealing, full of animation and shows with a highlight in multimedia shows and the music firework “Bells” presented by the Pirotecnica Oleirense and by Luso Pirotecnica.

The spotlight was held on the natural and cultural heritage of Oleiros, at the geomonuments, at the walking trails, at the traditions and gastronomy of its parishes and villages and at the gains of local associations that played an essential role in the realization of the activities in the region.

The Naturtejo Geopark, like usually, marked presence with the objective of presenting its territory with refreshing suggestions for this summer and a presentation of the Global Geoparks of the UNESCO, as well as sharing touristic and educational programs, promoting the cultural agenda of the 2nd semester of 2016 and giving the knowledge of its associates and partners with proposals for accommodation, catering, outdoor activities and geoproducts. During the opening of the fair, the secretary of the State of Forests, Amândio Torres visited the stand of the Naturtejo Geopark and praised the strategy that made this territory part of the UNESCO 10 years ago.

It was the 16th edition of the event with presenting exhibitors from the region as well as from other parts of the country including the “Caprinculture – the cultural, economic and touristic importance” colloquium where the fundamental activities for the development of Oleiros were discussed.

Another spotlight was given to the historic Callum wine, bottled and presented at the fair by two brands and the local products like strawberry tree, cheese, linen handicraft, cork products, wood, leather shoes and others.

The multimedia application “OleirosXplore” was launched for helping tourists during their visit of Oleiros, available to download in the AppStore, with broad information on the geodiversity of this region by the Naturtejo Geopark. Joana Rodrigues and Alice Marcelo were the promotional forces at the Geopark stand.

11th – 13th August – Solférias program in the territory. Through the “Solférias” operator 5 persons came from Lisbon to the territory, doing a 3 day program of the Geopark. They participated in the following activities: Visit to Foz do Cobreão and passing by the Portas do Vale Mourão viewpoint; boat trip in Vila Velha de Ródão through the Portas de Ródão natural monument; visit to the historical villages of Monsanto and Idanha-a-Velha; walking path PR3 Fossil path, passing by a typical village, ruins of the Templar castle, the Ichnological Park Penha Garcia and by the watermill complex. These activities were accompanied by the guide Rui Nunes.



13th, 15th August – Hikes about the Geodiversity of Penamacor. Coming from Lisbon the geotourists, some with roots in the municipality of Penamacor, found several activities to do in this summer in the Naturtejo Geopark. At the 13th August a group of 7 people concluded the 12 km walking track in Serrinha, at the Aldeia de João Pires to get to know the several interesting points of the geosite “Granite geofoms of Serrinha”. After this hike, 4 persons showed interest in visiting the geosite “Roman mining complex of Presa” and at the 15th August they brought 2 more participants. They went to see the ancient open-air mine of Presa with having the opportunity to identify several traces left by the Romans as well as to understand better their exploration and exploitation techniques. After the collection of a piece of gold in the conglomerate that remained from the exploration, the group went on to the Ribeira da Meimoa with the objective of learning a technique of gold panning. At the end of the activity it was possible to find such a desired piece of gold. The instructor of this visit was Mariana Vilas Boas.



15th August – Signing of the protocol between the Abastena company and the municipality of Oleiros for the valorization of the Waterfalls of Fraga da Água d'Alta geomonument. The day of the municipality came back to recognize the active associativism through the signing of the execution protocols with 9 associations. These execution protocols aim a partnership between the associations and the municipality with the intention of promoting social, cultural, educative, sportive and recreational activities. The associations included in the protocols count with an activity plan that is continuous and permanent along the year in and out of the municipality. The associations are the following: Associação Humanitária dos Bombeiros Voluntários de Oleiros, Sociedade Filarmónica Oleirense, Rancho Folclórico e Etnográfico de Oleiros, Casa do Benfica em Oleiros, Associação Recreativa e Cultural de Oleiros, Associação Pinhal Total, Associação Trilhos do Estreito, Associação Desportiva Águias do Moradal, Associação Grupo dos Amigos Incondicionais do Orvalho. These protocols represent a support of more than 320 thousand euros. On the same day, the cooperation protocol between the municipality and ABASTENA - Sociedade Abastecedora de Madeiras, LDA – for the valorization of the Waterfalls of Fraga da Água d'Alta natural monument was set. The cooperation between both has the development of intervention projects in Fraga as basis with the objective of its condition and definition as a protected natural monument area, as well as initiatives and projects for environmental awareness and appreciation.



15th – 20th August – Researcher of the University of S. Paulo is working in the Naturtejo Geopark. Alexandra Oliveira, currently doing her PhD at the University of Campinas in strategies for geo-conservation and Geoparks, came to learn about the reality of Portuguese Geoparks to serve as model for a project that is being developed in the state of S. Paulo. With Carlos Neto de Carvalho and Mariana Vilas Boas, Alexandra Oliveira analyzed during 5 days on-site examples of good practice in geo-conservation in the Naturtejo Geopark while having contact to local entrepreneurs and associations and with the local gastronomy, customs and traditions, as well as with the daily work and the scientific investigation in the process of the development in a wide territory and with broad geodiversity. Besides to her PhD work, Alexandra Oliveira had the opportunity to experience the territory in its dimensions learning about this land and enjoying what it has to give.



18th August – Gold mining in the Roman mines of Presa. While spending their holidays in Penamacor a group of 3 persons showed interest in visiting the geosite “Roman mining complex of Presa”. They went to see the ancient open-air mine of Presa and had the opportunity to identify several traces left by the Romans as well as to understand better their exploration and exploitation techniques. After the collection of a piece of gold-rich conglomerate that remained from the exploration, the group went on to the Ribeira da Meimoa with the objective of learning a technique of gold mining. Right after the first washing it was possible to find gold. The instructor of this visit was Mariana Vilas Boas.

IMPACT OF GEOPARK IN MEDIA



TV & Radio

12 de Agosto – Beira Baixa TV Naturtejo - Geopark at the Pinewood Festival
<https://www.youtube.com/watch?v=IPVl5184t9M&feature=youtu.be>

Newspapers & www

Agosto (YupMag – Magazine of Rural Tourism) – Naturtejo Geopark Flavours' Territory

3 de Agosto (Povo da Beira) – Naturtejo Geopark celebrates 10 years in Penha Garcia

3 de Agosto (Gazeta do Interior) - Penha Garcia marks anniversary of Naturtejo Geopark-
Minister of Culture praises union between local communities and Science

4 de Agosto (Reconquista) – The Heritage of Earth and Man – Municipalities value territory

4 de Agosto (Reconquista) –UNESCO Programme – Naturtejo celebrated 10 years

10 de Agosto (Povo da Beira) - AHRESP Castelo Branco congratulates and recommends
Naturtejo Geopark

17 de Agosto (Gazeta do Interior) – Boom Festival brings to trade increases in sales of
40%

18 de Agosto (Reconquista) – Boom Festival ends this Friday in Idanha-a-Nova

PROMOTION FOR THE GENERAL PUBLIC



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POR QUEM A FAZ E POR QUEM A ENSINA
encontro de cientistas e professores de ciências

7 setembro 2016
escola secundária de águas santas

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- para professores de Física e Química**
Arnaldo Madureira, Celso Ferreira e Filipe Castro
- para professores de Matemática**
Raul Aparício e Sara Cruz

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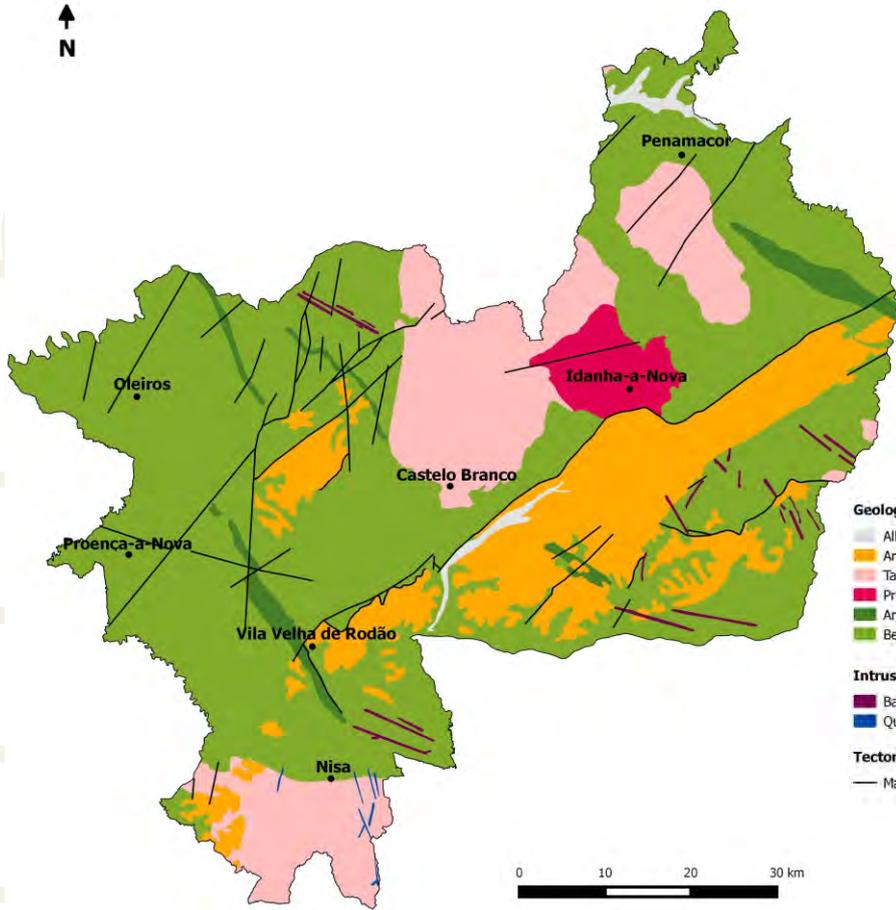
www.youtube.com/geoparknaturtejo



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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)

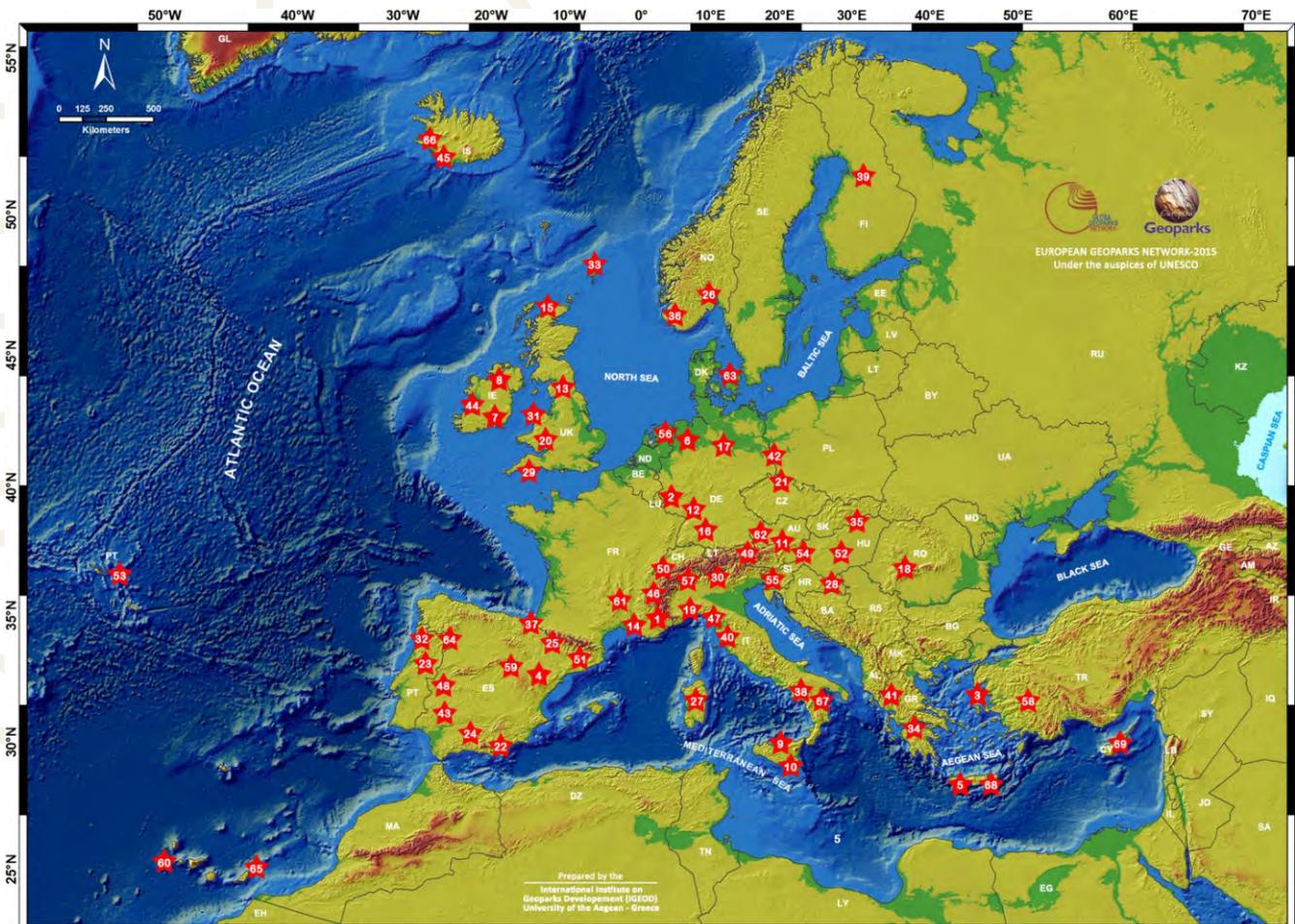
Intrusive rocks

- Basic rocks, aplites and pegmatites
- Quartz

Tectonic

- Main faults

Geoparks: Geology with human face





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