

*kubinyii* (Kovats ex Ettingshausen) Czezcott, *Podocarpium podocarpum* (A. Braun) Herendeen. Contrary to Pitsidia, the Makrilia flora illustrates a remarkable higher diversity. Especially, the mixed mesophytic forests comprise a great number of various deciduous accessory elements like *Zelkova zelkovaefolia* (Unger) Kotlaba, *Ulmus* L., *Carpinus* L., *Fraxinus* L. and *Tilia* L. Likewise, the families Lauraceae and Magnoliaceae are well diversified in Makrilia flora, accompanied by other thermophilic taxa like *Engelhardieae*, *Tetraclinis salicornioides* (Unger) Kvacek and *Asterocalyx styriacus* Ettingshausen. At the same time, in Makrilia the sclerophyllous woody plants are more frequent and diverse.

Conversely, the flora of Vrysses demonstrates a more sub-humid character with many xeromorphic elements that indicate the occurrence of well-developed sclerophyllous plant associations. The mesophytic woodland palaeocoenoses are clearly less diverse and probably poorly developed. Tall deciduous trees like beech and oaks are apparently lacking. Instead, only a few deciduous shrubs like “*Parrotia*” *pristina* (Ettingshausen) Stur and *Ziziphus ziziphoides* (Unger) Weyland seldomly occur. Typical swampy plants are completely absent here.

Climatically, the examined plant assemblages demonstrate a warm temperate character for the Late Miocene of Crete. Without any doubt, all of them include a prominent proportion of sclerophyllous woody plants which increases gradually from the Early Tortonian to the Messinian and these elements eventually established a very strong representation at the Messinian stage. This fact probably indicates a gradual transition to drier conditions and an increased seasonality of precipitation during the Late Miocene in the Cretan area. This conclusion is strongly supported as well by all the related palynological records from the island.

## European Geopark Network and Geotourism

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Established in 2000, the European Geoparks Network (EGN) aims to protect geodiversity, to promote geological heritage to the general public, as well as to support sustainable economic development of geopark territories, primarily through the development of geological tourism.

The network has drawn together territories from across Europe that share these aims and now work together in an active and dynamic way in order to achieve them. Originally consisting of four territories, the network has been expanded to include, as of May 2010, 37 territories across 15 European countries.

In 2001 the European Geoparks Network signed a formal agreement with the UNESCO Division of Earth Sciences, whereby UNESCO gave the network its endorsement.

A further agreement was signed with UNESCO in 2004 whereby the EGN was given the responsibility for regulating membership of European Geoparks in the UNESCO Global Geoparks Network. As a result the EGN acts as the European sector of GGN.

The structure of the European Geoparks Network is relatively simple and comprises an Advisory Committee (11 members including representatives of UNESCO, IUGS and IUCN) and a Coordination Committee (comprising of two representatives from each member). Decisions concerning the network are only taken by the Coordination Committee. As part of the Coordination Committee, there is an elected EGN Coordinator and Vice Coordinator to represent the whole Network. They coordinate contacts with other international bodies (E.U., UNESCO, IUGS, IUCN, Council of Europe etc.) and prepare the agenda of the meetings in cooperation with the meeting hosts.

The European Geoparks Network adopted a common logo which is registered in all European countries. An EGN member has the right to use the European Geopark logo in its communications thereby contributing over time to creating a common image of quality, linking the enhancement of European Earth heritage with sustainable development.

Membership of the EGN, entitles a Geopark to use the logo of the EGN in its promotional material and is entitled to call itself a European Geopark. According to the Madonie Declaration, it is also entitled to use the appropriate logo of the Global Network of Geoparks. These logos must only be used on products produced directly by the Geopark management.

In order to achieve high quality standards in Geoparks, the EGN decided to establish an evaluation procedure for all new applications. Evaluation missions are undertaken by two Geopark experts who are sent to the applicant territory to evaluate the application and to discuss the application with the relevant national and local authorities as well as stakeholders and local communities.

## **Vulnerable geosite protection and management in Geoparks – a case study of tafone in Lesvos petrified forest Geopark**

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Geoparks consists of a number of adjacent geosites which have different attributes in terms of value (scientific, educational, aesthetics) and vulnerability. In the Lesvos Petrified Forest Geopark area, beyond the fossilized plants which constitute a natural monument of international value, there are many other sites of interest in terms of geology, geomorphology, ecology and local traditions. Coastal geosites of the Lesvos Petrified Forest are of significant geomorphological, aesthetic, educational and touristic value including cliffs, collapsed boulders, tafoni structures and cavernous weathering forms. Tafoni are widespread on the Miocene volcanic formations on Sigri coast. Miocene volcanics are hosting the silicified plants of the Petrified Forest; a protected natural monument of international value and beauty. Due to their importance and fragility the Natural History Museum of the Lesvos Petrified Forest adopted special measures for the protection and conservation of the tafoni structures of the territory. The research activity in the costal area of western Lesvos island led to the inventory of tafoni. As a consequence of the research some endangered tafoni were brought to the museum for protection, conservation and exhibition. This tafoni exhibition introduces the museum visitors to the processes forming the external surface of our planet.

## **Quaternary tectonics of the Western Carpathians in Poland: Evidence from deformed fluvial terraces**

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Neotectonics of the Carpathians used to be studied extensively, particular attention being paid to the effects of large-scale domal uplifts and open folding above marginal zones of thrust and imbricated map-scale folds, and rarely to the characteristics of young faulting. Neotectonic faults tend to be associated with the margins of the Orava-Nowy Targ Basin, superposed on the boundary between the Inner and Outer Western Carpathians, as well as with some regions within the Outer Carpathians. The size of Quaternary tilting of the Tatra Mts. on the sub-Tatric fault were estimated at 100 to 300 m, and recent vertical crustal movements of this area detected by repeated precise levelling are in the range of 0.4-1.0 mm/a in rate. Minor vertical block movements of oscillatory character (0.5-1 mm/yr) were detected along faults cutting the Pieniny Klippen Belt owing to repeated geodetic measurements performed on the Pieniny geodynamic test area. In the western part of the Western Outer Carpathians, middle and late Pleistocene reactivation of early Neogene thrust surfaces was suggested. Differentiated mobility of reactivated as normal Miocene faults (oriented N-S to