

**NEW DATA ON MESOZOIC PALEOGEOGRAPHY OF THE VARDAR DOMAIN:  
ALMOPIAS AND PEONIAS BASINS  
(MACEDONIA, NORTHERN INTERNAL HELLENIDES)**

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As the problem of western or eastern origin of some of the ophiolitic units obducted on the Pelagonian domain has not yet been clearly understood, the series outcropping in some of the areas supposed to be at the origin of the sedimentary units, have been studied, especially Almopias and Peonias series.

**Almopias series:** Mercier (1968) recognized Almopias series as 'trough series' during Upper Jurassic and Cretaceous times, then, the existence of an Upper Cretaceous oceanic crust in this area was emphasized (Dercourt et al., 1985).

Our studies show the following results:

1. The data used to conclude that there was an oceanic crust during Upper Cretaceous times in the Almopias area, are partly wrong;
2. It is possible to define, before the obduction processes, an "isopic zone", supposed to be a deep basin (perhaps with an oceanic crust) during Jurassic but also during Triassic times, according to new paleontological and structural data.

**Peonias series:** Our results lead us to consider that the Peonias basin existed during Jurassic times, as Mercier (1968) said, but also during Triassic times. The opening of this basin would have started during the middle part of Triassic times.

The different volcano-sedimentary formations outcropping in Peonias area are also discussed, in respect to their age and their position in the geodynamic evolution of this area which gives new and simple interpretations of some of the Peonias units.

**PRELIMINARY GEOTECTONIC INTERPRETATION  
OF THE EAST MEDITERRANEAN CHAIN AND THE HELLENIC ARC**

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Geophysical investigation of the Eastern Mediterranean permitted the compilation of a new tectonic sketch map of the area of the East Mediterranean Chain and the Hellenic Trench. The overall structure of the East Mediterranean Chain shows an accretionary character in front of the Hellenic Arc with detachment of the Mesozoic-Tertiary sediments from their basement. This phenomenon is in accordance with the geological observations of the

Hellenides. Additionally, the East Mediterranean Chain is much more wide in the Ionian side as well as in the Levantine, in contrast to the central area, where it is shortened. This is due to the beginning of collision with the African margin in the central area in contrast to the two sides, where the convergence is still free. The beginning of collision is probably the cause for the development of a sinistral strike-slip shear zone in the eastern side of the Hellenic trench along the Pliny basin.

## **A COMPUTER ASSISTED METHOD FOR THE DETERMINATION OF THE GEOLOGICAL CHARACTER OF LINEAMENTS DETECTED IN LANDSAT SATELLITE IMAGES**

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The directions of most lineaments detected on the Landsat MSS satellite images in Western Greece, appear to be controlled by those predominant in the Alpine and Post-alpine tectonic structure. A number of 262 lineaments from this region, was classified, using informations from geological maps, into four different categories (tectonic lineaments, lithological boundaries, morphological lines and undetermined lineaments), on the basis of their geological character. At the end of this first processing stage the geological character of a large number of lineaments (137) was undetermined.

Thus, a second stage based on computer processing, was introduced. After the digitization of the lineament map the essential software was developed for the statistical analysis of the lineaments, based on their length distribution in different directions.

The final result of the proposed method was the definition geological character of 99 of the 137 previously undetermined lineaments.