

## **PERMOTRIASSIC SEQUENCES OF EASTERN GREECE: THE CASES OF PTELEOS (E. ORTHRYS MT.) AND YALTRA (NW EUBOEA ISL.)**

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Geological study, based on mapping at scale 1/5000 of the permo-triassic sequences in the area of Pteleos (E. Orthrys Mt.) and Yaltra peninsula (N. Euboea isl) showed: (i) in Pteleos the occurrence of a intense deformed permian sequence composing of meta-clastic and meta-carbonate sediments at the base of the Almopian nappe onto the gneisses and schists of the probably prealpine Flambouron unit. It should be noticed the transition between the permian and triassic carbonates and the absence of the volcanosedimentary complex of Lower and Middle Triassic, known from the Northern Greece. (ii) In Yaltra the occurrence of permian volcanosedimentary complex covered tectonically by shallow-water marine carbonates of Upper Triassic-Liassic (Subpelagonian unit), which have been cut off at the plane of their contact with the classical Middle-Triassic volcanites. The new results are discussed in comparison with other permo-triassic occurrences from the greater area of the Eastern Greece unit.

## **THE CLAY SEDIMENTATION IN THE OLOS-PINDOS BASIN DURING THE MESOZOIC: AN APPROACH FOR THE SOURCE IDENTIFICATION AND THE PROCESSES OF TRANSPORT**

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We describe and interpret the conditions of Mesozoic sedimentation in Olos-Pindos basin, by way of mineralogical and geochemical investigation of claystones; the samples are mainly collected from 7 profiles observed in the Karpenission area (Continental Greece), with addition of a few data from southern Peloponnesus.

The clay mineral composition and < 2 $\mu$ m geochemistry show variations indicating that there is no evidence of diagenesis with depth of burial; so the characteristics and the changes in the clay assemblages can be explained by changes in source areas, fluctuations of the direction of surface currents and size sorting.

During Upper Triassic, we favor occidental and proximal sources for the coarse detrital parts of the Pindos sediments and their clay fractions. These possible occidental sources might be continental inner parts of the Gavrovo-Tripolitza zone, uplifted during the first phase of Pindos rifting.

During the main part of the Jurassic, the sources for the clay fractions might be the North Africa margins and the European continental areas. These clay fractions were transported to the Olonos-Pindos basin by a powerful westward equatorial current which turned clockwise in the Western Tethys. The end of the Jurassic and the beginning of the Cretaceous are marked within clay fractions by: 1) an abrupt increase of the relative abundances of smectite and mixed-layer chlorite-smectite; 2) the appearance of serpentine and talc; 3) a marked increase of the Mg/Al and (Co + Ni + Cr)/Al ratios. These modifications may be explained by: 1) the late Jurassic Dinaro-Hellenic obduction; 2) the establishment of a westward circumterrestrial current through the Tethyan oceanic sea way, connected with the Pacific Ocean through the Caribbean. In this way, the smectite and serpentine rich clay fractions were inherited from erosion of paleohellenid continents in the internal Hellenid zones, which were folded and uplifted during the Upper Jurassic and the Early Cretaceous.

During Cretaceous the characteristics of the clay assemblages did not change and were always controlled by eastern sources and a westward current.

## **COMPARISON OF TWO PALEOZOIC DOMAINS IN TURKEY: SAIMBEYLI-ADANA IN TAURIDES AND ARAC-KASTAMONU IN PONTIDES**

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The well preserved Paleozoic outcrops, in Turkey, are scarcely seen in some localities mainly in Taurides and only in one location in Pontides. One of them, in Taurides, is exposed around Saimbeyli-Adana area, while that of the Pontides is seen in Arac-Kastamonu area. The Saimbeyli Paleozoic domain consists of from bottom to top, Armutludere (Ordovician?), Halıyaylasi (Silurian), Ayitepesi (L. Devonian), Safaktepa (M. Devonian), Gümüşali (U. Devonian), Ziyarettepesi (L. Carboniferous) and Yigiltepe (U. Permian) formations. All these formations show a thickness of approximately 4000 m. As for the lithology, the Armutludere formation is composed solely of shales representing foliation may be developed by very low grade metamorphism. Halıyaylasi and Ayitepesi formations are mainly made up of sandstone-mudstone-clayey limestone, respectively. All the other formations, range from M. Devonian to U. Permian in age, possess the lithologies consisted essentially of carbonate rocks. The Paleozoic domain in Saimbeyli-Adana area is easily observed to have been strongly affected by Alpine tectonic movement. The Paleozoic rocks, in Arac-Kastamonu area of Pontides, are apparently seen to have taken positionally place on top of Precambrian high-grade metasediments constituting the southernmost tip of Eurasian plate. The Arac-Kastamonu Paleozoic domain consists of from bottom to top, Yayladere (Cambrian?), Dotla (Ordovician), Zirze (Silurian) and Küreihadit (Devonian) formations. All these Paleozoic formations, recently called Smaçlar group, show a total thickness of nearly 3900 m. As for the lithology of Smaçlar group, the Yayladere formation consists of from bottom to top, metasandstone and argillite. The Dotla formation is composed basically of quartzite and