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Tethyan Evolution of the Aegean Domain from Early Jurassic to Late Cretaceous: Examples from Turkey

Paleotectonic and paleogeographic evolution of the Tethyan realm has become one of the leading case study in geology for the last decades. Following this tendency, the Eastern Mediterranean domain is now seen as a key region for who wants to understand the Tethyan evolution.

Based on our own field work and data from the regional geology, we focus on the Early Jurasic-Late Cretaceous tectonic evolution of the Aegean region. From (1) the integrated geological study of the Cretaceous ,etmi accretionary mÎlange of Northwest Turkey, and (2) its lateral correlation with the accretionary complexes of the Izmir-Ankara-Erzican suture, we propose a redefining of the Izmir-Ankara-Erzincan oceanic domain.

It implies first to review its time-space context (northern and southern margins, date of the opening and of the closure, its present-day field evidences). A new oceanic domain (the Lycian Ocean) has to be defined as the supra-subduction ocean developed over the subducting Izmir-Ankara-Erzincan Ocean. This Lycian Ocean is responsible for most of the ophiolites and associated mÎlanges found in Turkey and previously assigned to the Izmir-Ankara-Erzincan Ocean.

The previous results are integrated in a smaller-scale regional view (the Eastern Mediterranean domain) in the form of paleotectonic and paleogeographic reconstructions. This approach shows both the importance of lateral displacement between terranes during the tectonic evolution of the region (specially in the Late Cretaceous) and emphasizes the great complexity of the Mesozoic-Cenozoic geological evolution of the region.