



## **Post-Miocene Tectonics from Black Sea to Mediterranean Sea along Central Anatolian Plateau**

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The existences of the gross structures are crucial elements in the understanding of the Neogene evolution of the Anatolia. The structures, from north to south, are fairly documented extensional Black Sea coast structures, “N vergent tectonics” in Black Sea region, the cross cutting scar/shear zone -North Anatolian Fault- , S verging tectonics in central Anatolian overthrust belt (Cretaceous ophiolitic mélange belt), extensional Tuzgölü basin, basins like Cilicia, Mut situated to the back of the Cyprian arc and Cyprus locked subduction and accretionary tectonics (locked by approaching and colliding of the Eratosthenes and Hecatacus “seamount” obstacles).

The closure of the northern Neotethys during post-Late Eocene- pre-Miocene end with the collision of the squeezed “Anatolian Block” from south with the Eurasian Continent. Consequently the linkage of the central Anatolian basins is lost with the Seas (Paratethys) in north by the evolution of Black Sea Mountains. However, the subduction in southern Neotethys continued with a complex array due to oblique subduction between “Anatolian Block” and downgoing African-Arabian plates. The growth of the accretionary wedge along southeast Anatolia resulted in retreat of the Miocene Seas towards Basra Bay (Iraq) and collision of the southeast Anatolian belt operated to the end of late Miocene where the marine realm in eastern Mediterranean Sea continues. The rifting - sea-floor spreading in Red Sea, propagating of Dead Sea Transform to the north and oblique subduction in southern Tethys Ocean during different times in Miocene-Pliocene manifested a various different tectonic mechanism stories in the evolution of the Neogene basin in Anatolia.

Consequently progressive closure of the Tethys Oceans resulted in the development Central Anatolian and Eastern Anatolian Plateaus. The growth of the Plateaus, in other words, the progressive shortening from north to south during Late Miocene, ended with the escape of the Anatolian Block to the west during Pliocene as a result of the initiation of the North and East Anatolian Faults. The escape can be caused by the retreat of downgoing slab or enlargement of downgoing slab window or solely initiation of the North and East Anatolian faults as single shears or all. The escape was resulted in the NW-SE to NE-SW multi oriented extension in central Anatolian Plateau (from Ankara to Tuzgölü lake to Mut region) between North Anatolian in north and Cyprus in south.

To sum up, the regions between the seismogenic North Anatolian Fault in north and Kirenia of northern Cyprus in south experience an extension since Pliocene.

Key words: uplift, plateau evolution, locked subduction, Miocene, Anatolia.