

## Late Eocene-Oligocene palaeogeography of Thrace Basin and its relationship with Eastern Thrace Basin

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Thrace Basin is an area of interest for many studies since it bears a significant natural gas and oil potential. There are two prevailing views with the development of the basin. One of these views is that Thrace Basin was a fore-arc basin, generated by the northward subduction of Inner-Pontide Ocean during Middle Eocene – Oligocene. The second view assumes that Thrace Basin was an either intermountain or collisional basin.

Sedimentological studies and facies analysis conducted in Thrace Basin indicate that there are 13 distinct facies. It is revealed that Late Eocene-Oligocene sediments were deposited under shallow marine, lagoon and terrestrial environments by means of lateral and vertical facies associations. It is observed that the sequence commenced from a deep marine environment and upward passed to shallow marine and terrestrial environments from Eocene onwards in general. Besides, the presence of volcano-clastic materials within the sequence implies that the sequence was accompanied by a volcanism during the deposition. In the light of these data, it is considered that the fore-arc basin model will be appropriate.

Thrace Basin is separated from the basin in the east by Çatalca and Istranca uplift. This basin is known as “Eastern Thrace Basin”. The fill of this basin is composed of Oligocene marine Karaburun formation, overlying unconformably reefal limestones of Middle-Late Eocene unconformably. Karaburun formation begins by beach clastics as a transgressive series, and lasts by shallow marine and pelagic clastics and carbonates, and upward passes to deep marine clays bearing olistostromal units. These are overlain by deep marine channels, followed by uppermost coaliferous delta plain facies. This sedimentary succession shows that this basin is distinct from Thrace. Resting on Karaburun formation, delta plain sediments are characterized by lagoonal and some fluvial inputs, and have an age of Early-Middle Miocene based on mammalian fossils. Since it lies unconformably over beach deposits, it is differentiated here as a new unit, the Ağaçlı formation. It has an extent between Ağaçlı and Akpınar villages. Lithologically it includes claystone, marl, coal and some conglomerate and sandstone levels, and its thickness is up to 55 m. The sequence has a lagoonal character, and its lower levels bear fluvial inputs. The mammalian fossils such as *Cricetodon meini*, *Democricetodon* sp., *Microdyromys* sp., Rodentia indet., *Alloptox* sp. are collected from mudstones in these levels, and an age of Early-Middle Miocene is given to this unit. Its age is Oligocene-Early Miocene according to pollens from these levels. We confirm the view that Thrace Basin is a separate basin from the Eastern Thrace Basin, and they do not form terrestrial basin occasionally intruded by marine inputs.

## The Isparta Angle and its relationship with Aegean-Cyprus Tectonic Arcs, SW Turkey

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Recent active tectonics of the southwestern Anatolia region is very interesting and complex for academic studies. It has been studied about plate tectonics especially for 20 years. Taurus Mountains in Turkey which are located in Alpine-Himalayan orogenic belt, are one of the most active tectonic region in this orogenic belt.

Although the Taurus Mountains generally run in approximately east-west direction, this order is interrupted in Isparta-Burdur Region (Lakes Region). They locally bend and form an inverse V shaped angular deformation which is formed around the lakes region located in the north of Antalya Bay. This tectonic structure is known as the Isparta Bend or the Isparta