



## Neotethys Closure History of Western Anatolia — A Geodynamic Review

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During the last decade, numerous tectonic models were proposed for the closure of the Neotethys Ocean in Western Anatolia that led to the collision of the Anatolide–Tauride and the Pontide continents during the Palaeogene. These models disagree on some fundamental aspects as the pre-subduction palaeogeography (from one to multiple oceanic strands), number of contemporaneous subduction zones (from one to three), and post-collision slab dynamics (frontal break-off, roll-back, tearing). We compiled, reviewed the most recent of these tectonic models, and pinpointed fundamental controversies that we tentatively resolved based on a multi-disciplinary constraints. Among our favoured interpretations, the Neotethys closure features the collision of two continental domains (Tavşanlı–Afyon, and Mendere–Tauride micro-continents) and the successive consumption of two oceanic domains during the continuous subduction of a single lithospheric slab from ~95 Ma to ~40 Ma. Although frontal break-off during the Eocene cannot be univocally excluded, we suggest that the rupture of this slab intervened only during the Miocene, as a tear fault along the highly curved eastern limb of the Hellenic slab. Besides, other aspects such as the timing and locus of subduction initiation, and the transition from subduction- to collision-related tectonics remain ambiguous and should trigger further investigations, especially of the sub-ophiolitic metamorphic soles and the metamorphic evolution of the Mendere Massif.