



Mid-Miocene strike slip in Continental Greece

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The Aegean system and Continental Greece are marked by back-arc extension that is commonly viewed as occurring in two stages. 1/ classical back-arc extension with N150 normal faults (e.g. parallel to the trench) during Mid-Miocene 2/ followed by mainly N50 dextral strike-slip (North Anatolian fault-NAF) with E-W normal faults (Gulf of Evvia and Corinth) since 5Ma marking the impact of the NAF in the tectonic system. However, some published structural data in the Cyclades show that N50 dextral strike-slip were already active during Mid-Miocene time (e.g. during granite intrusion between 15 and 10 Ma), questioning this classical view of the Aegean extension. In this study, we wish to constrain the potential activity of dextral strike slip fault during Mid-Miocene in Continental Greece. To achieve this objective, we focus on Evvia, Continental Greece, to constrain the tectonic context of the deposition of two Mid-Miocene basins.

The Northern basin shows N150 syn-sedimentary normal faults and late E-W normal faults. The Southern basin is located near the roughly N50 contact between the Cycladic Blueschist unit and the Pelagianian. Faults and folds analysis demonstrates the existence of a major N50 dextral fault zone that controls the deposition of the Mid-Miocene basin.

On these bases, we propose that N50 strike slip fault were active together with N150 high angle normal faults in Mid-Miocene, likely representing strain partitioning between extension related to slab rollback and the onset of westward extrusion of Anatolia.