

# FORMATION AND EMPLACEMENT AGES OF THE SSZ-TYPE NEOTETHYAN OPHIOLITES IN CENTRAL ANATOLIA, TURKEY: PALAEOTECTONIC IMPLICATIONS<sup>°</sup>

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## ABSTRACT

Isolated outcrops of dismembered ophiolitic rocks occur as allochthonous units (Central Anatolian Ophiolites, CAO) in the Central Anatolian Crystalline Complex, which represents the metamorphosed passive northern edge of the Tauride-Anatolide Platform. Both stratigraphic observations and chemical data indicate that the CAO formed in a supra-subduction zone (fore arc) setting within the Vardar-Izmir-Ankara-Erzincan (VIAE) segment of the Neotethys.

The epi-ophiolitic, sedimentary cover of the Sarıkaraman Ophiolite, which is a representative unit of the CAO, is characterized by epiclastic, volcanogenic, deep-sea sediments, with the latter being intercalated with debris-flows. The most significant planktonic foraminiferal association found in the lowest pelagic member of this unit indicates an early-middle Turonian to early Santonian age. K/Ar data (81-65 Ma) collected from post-collisional granitoids intruding both the basement rocks and the Sarıkaraman Ophiolite imply a post-early Santonian to pre-middle Campanian em-

placement age for the CAO. The high volume of epiclastic volcanogenic sediments that occur alternated with both the pelagic limestones and the radiolarites of the CAO suggests that the depositional setting was a marginal sea adjacent to a volcanic arc. The occurrence of debris-flows indicates also that the depositional basin was affected by tectonism, that resulted in major slides and mass-gravity reworking of pre-existing units and of arc-derived volcanics and sediments.

The stratigraphy and the age of formation and obduction of the CAO were compared with other supra-subduction zone type ophiolites of both the eastern (Turkey) and the western (Greece) parts of the VIAE segment of the Neotethys. This comparison indicates that the western intraoceanic subduction is definitely older. Accordingly, we surmise that important transform faults were separating the continental micro-plates within the VIAE-ocean (e.g. the Tauride-Anatolide microplate) during the closure of this oceanic branch.

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