

# Relicts of Palaeotethyan fore-arc basins in western Turkey

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The Palaeotethyan suture has a long controversial history in Turkey. Sengor and Yilmaz defined this suture as located north of the Pontide suture implying a southward subduction vergence of the Palaeotethyan Ocean. New investigations in western Turkey have demonstrated with clear evidences that the Palaeotethyan suture zone was also present south of the Pontide, in the western Taurides. Relicts of Palaeotethyan fore arc basins are present in the Karaburun peninsula and in the Konya area. In Karaburun, the fore-arc sequence is characterized by olistostromes containing blocks of Upper Silurian to Lower Carboniferous pelagic and shallow water in a Lower Carboniferous matrix dated by inherited zircons age and the whole sequence is unconformably recovered by a Lower Carboniferous-Late Cretaceous platform. The fore-arc characteristics are shown by the presence of strongly deformed

and thermally altered pelagic blocks in a nearly undeformed matrix. The Palaeozoic units have been uplifted and eroded during Early Triassic (? Late Permian) times.

In the Konya area, the oldest unit of the Palaeotethyan fore arc basin is mostly made up of Silurian-Early Carboniferous metacarbonates. This unit passes laterally and vertically to Devonian-Early Permian series having continental margin, shallow water and pelagic characteristics. They are intruded or juxtaposed to different kind of metamagmatic rocks, which show MORB, continental arc and within plate characteristics. The whole complex is unconformably covered by Triassic-Cretaceous meta-sedimentary units. The subduction of the Palaeotethys Ocean during Carboniferous-Triassic times induced the development of a magmatic arc and fore arc basin. Before the Early Triassic (? Late Permian) time, the fore

arc basin has been uplifted above sea level and eroded.

Both in Karaburun and Konya, development of back arc openings (Küre-Maliac-Pindos type) are marked by a general subsidence and the apparition of pelagic conditions during Early-Middle Triassic times. Finally a suture zone formed during Carnian-Norian times shown by the presence of molassic "Cayir type" clastics all along the Menderes-Tauride Cimmerian block due to the closure of the Palaeotethys.

Considering these new results, the Palaeotethys was separating the Gondwanian Menderes-Taurides block from the Eurasian Karaburun-Konya terrane. The development a magmatic arc, fore arc and back arc basins on the southern Eurasian margin are clear evidences for a north verging Palaeotethys subduction zone.