AAPG International Conference
Barcelona, Spain
September 21-24, 2003

Francois Rosselet[1], L. Beccaletto[1], G. M. Stampfli[1] (1) Lausanne University, 1015 Lausanne, Switzerland

Tethyan Evolution of the Aegean Domain from Paleozoic to Late Triassic: Examples from Turkey

The Aegean region is a key area to understand the paleotectonic and the paleogeographical evolution of the Tethyan realm. The complexe mesozoic-cenozoic evolution of the area gave birth to equivocal interpretations of the Tetyan domain evolution. Recent field works in western Turkey permit to constrain the evolution of the Paleotethys ocean which was separating Eurasia from Gondwana from Silurian to Late Triassic times. The Karaburun peninsula (Izmir-Ankara Zone) is a key area for understanding the closure of the Paleotethys as we can observe at the same place both Paleotethyan fore-arc and back-arc basins. The detailed study of the area permitted to exclude a south vergence of the Paleotethys subduction like proposed by some authors. The opening of the Neotethys is regarded here as the result of the strong slab-pull effect of the subducting Paleotethys ocean. The Neotethys opening detached the Cimmerian terrane from Gondwana which will softly collide with the Eurasian margin in Late Triassic times (Cimmerian orogeny). Remnants of Carnian flexural basin and compressive structures sealed by Early Jurassic are observed along the northern margin of the Cimmerian terrane (Western Taurides). A succession of back-arc basins ("Meliata", "Maliak", "Küre", "Pindos") took place in the southern Eurasian margin and present very similar facies from the Hellenides to the Taurides ("Pietra Verde"). These back-arcs will also disappear giving birth to supra-subduction oceans ("Vardar", "Izmir-Ankara-Erzincan", "Lycian"). The Paleotethys suture has been then transported with the alpine nappes during Neogene.